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Of several L A T E
Voyages and Discoveries:

- I. Sir *John Narbrough's* Voyage
T O T H E
S O U T H - S E A
By the Command of King *Charles the Second*:
And his Instructions for settling a Commerce in
those Parts. With a Description of the Capes,
Harbours, Rivers, Custom of the Inhabitants,
and Commodities in which they Trade.
- II. Captain *J. Tasman's* Discoveries
on the Coast of the
South *Terra Incognita*.
- III. Captain *J. Wood's* Attempt to
Discover a North-East Passage to *CHINA*.
- IV. *F. Marten's* Observations made in
Greenland, and other Northern Countries.

To which are Added, a L A R G E
INTRODUCTION and SUPPLEMENT,
CONTAINING
Short Abstracts of other Voyages into those Parts,
and Brief Descriptions of them.
*The Whole Illustrated with Exact C H A R T S, and
Curious F I G U R E S.*

L O N D O N, Printed for *D. Brown* without Temple-
Bar, *J. Round* in Exchange-Ally, *W. Innys* in St. Paul's
Church-yard, and *T. Ward* in the Temple-Lane. 1711.

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T H E INTRODUCTION.

THE Advantages of keeping judicious and accurate Journals in Voyages and Itineraries, are so many and great, in the Improvement of Geography, Hydography, Astronomy, Natural and Moral History, Antiquity, Trade, Empire, &c. that few Books can compare with them either for Profit or Pleasure. Therefore Ramusio, the De Brys, Hackluit, Purchas, John de Laet, Thevenot, &c. have begun a very commendable Design, and their Works are like to be always useful.

The Collection now publish'd containing some curious Voyages, and exact Journals both to the South and North, beyond and through the Magellan Straights; as also to Greenland or Spitsberg, Nova Zembla, and Groneland or Groyne-land; 'twill be necessary to premise in general, what other Navigators have gone before to those Parts, and what Additional Knowledge may be reap'd from the ensuing Work; in doing of which we shall observe Order of Place and Time.

A

First

First of some Discoveries and Navigations towards the Southern Parts of the Globe, South-West and South-East.

A. D. 1519. Ferdinand Magalhanes, a Portuguese Gentleman, upon some disgust taken at his Master King Emanuel, applied himself to the Court of Castile, offering to make great Discoveries of the rich Spice-Islands by the West, and to sail round the Globe. He was furnish'd with five Ships and 250 Men, by the Command of Charles V. They departed from Sevil August 10, 1519. and after having in vain attempted to pass thro by the great River of Plate, and having winter'd in Port St. Julian, they found out a Streight leading into the South Sea, call'd afterwards by the Discoverer's Name, the Magellan Streight; through which they were the first that pass'd from the Atlantick into the Pacifick Ocean, and so round the Globe home again by the Molucco's and Cape of Good Hope, having spent above three Tears in this Circumnavigation. At the Entrance into the Streight they found on the Shore many Sepulchres or Graves, whither the Inhabitants resorted in Summer to bury their Dead; as also a great Whale thrown up, and many Bones.

A. D. 1525. Garcia de Loaysa a Spaniard, enter'd into Magellen's Streight, and gave Names to several Places; as did also Simon de Alcazova in the Tear 1534. Afterwards the Bishop of Placentia fitted out 3 Ships in the Tear 1539, one of which got through the Streights of Magellan to Arica in Peru.

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A. D 1577. Sir Francis Drake, with five Ships and Parks, and 164 Men, began his famous Voyage round the Globe; sailing thro' the aforementioned Streight of Magellan to the Coasts of Peru, New Spain, Mexico and California; returning to England by the East Indies and Cape of Good Hope. Capt. John Winter was separated from Sir Francis upon their Entrance into the South Sea, and by Storms was forc'd back again into the Streights of Magellan thro which he repass'd home, being the first that sail'd from the Pacifick into the Atlantick Ocean through these Streights. Ladrillar, a Spaniard, being sent from Chile to attempt this Passage, was driven back by Storms and the approach of Winter Anno 1579. the Viceroy of Peru, thinking that Sir Francis Drake was sail'd to the Magellan Streights, equipt Don Sarmiento in the Port of Lima with two Ships to pursue him. This Spaniard coasted Chile and Patagonia, entring the Streights, and so passed to Brasil. Sarmiento upon his return to Spain, perswaded Philip II, to send two Colonies to plant and fortifie in the Streights of Magellan, in order to prevent and obstruct the Navigations, Depredations, or Settlements of the English and Dutch in those Parts; but they all miscarried partly by Shipwrack, partly by Famine, and the Barbarities of the Patagons. This happen'd in the Years 1584, 1585, 1586. The Project was contrary to the Advice of the Duke of Alva.

Sir Francis in the Magellan Streight saw several of the Patagons, or Inhabitants, in their Canoes and Huts; their Boats were made of the Barks of

Trees and Seal Skins, very artificially interwoven, the Head whereof was semilunar. They painted their Faces either with an Earth or a Vegetable. In their Huts, made of Boughs and Skins of Fishes, he found Sea-Wolves and huge Muscles, whose Shells they sharpen so with rubbing of Stones that they cut every thing with them. Their fresh Water was kept in Vessels made of the Barks of Trees, and their Cloathing was chiefly made up of Skins of Penguins, Seals, and other Animals peculiar to the Climate.

A. D. 1586. *The third Circumnavigation of the Globe was undertaken and performed by Thomas Candish Esq; who very prosperously finish'd that in two Years and two Months, which took both Magellan and Sir Francis Drake three Years in compassing.*

Anno 1593. *Sir Richard Hawkins made his Voyage into the South Sea by the same Streight that the aforementioned Navigators did before him. He gives the most accurate Description of the Tree that bears the famous Winter-bark, see his Observations in Fol. printed 1622. p.88. This Spicy Aromatick Tree (says he) bears Leaves of a whitish Green, not unlike the Aspen; and bears its Fruit in Clusters like the Hawthorn, but that it is green; each Berry of the bigness of a Pepper corn, and every one of them containing within 4 or 5 Grains or Seeds, twice as big as Mustard Seed, which broken are white within and bite like the good Pepper; the Bark hath the Taste of all sorts of Spices, very Stomachick and Medicinal. We found it in all Places of the*
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The Introduction.

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Streights where any Trees grew. Here are abundance of *Muscles*, very refreshing Diet and full of *Pearl*; also *Limpets*, and incredible Numbers of *Penguins* and *Seals*.

A. D. 1598. *The fourth Circumnavigation of the Globe was perform'd by Oliver Noort, a Dutchman, his chief Pilot being Capt. Melis an Englishman, who had accompanied Mr. Candish in his Voyage. This Noort steer'd much the same Course with Magallhanes, Drakes and Candish, having spent near three Years in encompassing the Earth. He saw upon the Land of Patagonia some Deer, a sort of Bufalo and Ostriches.*

We may note here, that in the Year 1589, the Delight of Bristol, one of the Consorts of John Chidley Esq; and Mr. Paul Wheel got into the Streights of Magellan; but meeting with Misfortunes, was forced back, having reach'd only Cape Froward. Also in the Year 1598. Verhagen's Fleet, under Sir James Mahu, Simon de Cordes, Sebald de Wert, &c. wherein William Adams was chief Pilot, suffer'd great Miseries in these Streights. This Sebald de Wert gave Clusius a description of the Winter-bark-Tree growing up and down Petagonia. They preserv'd themselves with Geese, Ducks, vast large Muscles, Penguins, Seals, &c. Returning out of the Streight, and sailing Southwards the discover'd Sebald's Isles.

A. D. 1614. George Spilbergen General of a Dutch Fleet of six Ships, passed thro the Streights of Magellan and the South Sea to the East Indies, from whence he returned by the Cape of Good Hope to the Texel, having been out about

three Tears. *This was the fifth Circumnavigation of the Globe.*

A. D. 1609, 1610. Pedro Ferdinand Giros a Portuguese, and Capt. Ferdinand de Quir, a Spaniard, do both affirm, *That they sailed at several times above 800 Leagues together on the Coast of a Southern Continent, until they came to the height of 15 degrees of South Latitude, where they found a very fruitful, pleasant and populous Country. Giros began to take his Course in the height of the Streights of Magellan. This vast Tract of Land perhaps may be one side of, or may belong to Jansen Tasman's Land, Vand Diemen's Land, Zelandia Nova, Hollandia Nova, Carpentaria, and New Guinea; which the Dutch afterwards coasted, and gave Names to many Bays, Rivers and Capes, in the Years 1619, 1622, 1627, 1628, 1642, and 1644, from the Equinoctial to 44 deg South Lat.*

The Hollanders have indeed made the greatest Discoveries towards the South Terra Incognita, which they have not yet divulg'd. Dirk Rembrantse about 15 or 16 Tears ago publish'd in Low Dutch, a short Relation out of the Journal of Captain Abel Jansen Tasman upon his Discoveries of the South Terra Incognita in the Year 1642, to the Southward of Nova Hollandia, Vandeman's Land, &c. 'Tis remarkable that all the Circumnavigators of the Globe enter'd into the East Indies either by the Philipppines or the Moluccos, being peradventure hindered from passing round more Southwards by that vast long Chain of Land, which seems to stretch almost from the Equinocti-

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al to the 50 degree of South Lat. Therefore they generally steer'd upon the South Sea, either for the Isles of Salomon, or those called the Ladrones.

A. D. 1615 Will. Cornelius Schouten of Horn, and Jacob le Maire of Amsterdam, undertook the sixth Circumnavigation of the Globe, by a new Passage Southwards from the Streights of Magellan in Terra del Fuego, which they happily discover'd and pass'd, finding out Sebald's Isles, Staten Land, Maurice Land, Barnevelt Isles and so by Cape Horn, in the 57 deg. of South Lat. they found out a new way into the South Sea, call'd ever since le Maire's Streight; in this Voyage they gave Names to several Islands and Countries, returning to Holland by the East Indies, having been out two Years and eighteen Days. Afterwards a Spanish Fleet, under Bartoleme Garcia de Nodal. Anno 1618, sail'd thro' le Maire's Passage; and in the Year 1623, part of Prince Maurice's Fleet steered the same Course, discovering some small Isles. Nodal saw People near le Maire's Streight, all painted and clad with Bird's Skins; they fed upon yellow Flowers like Marigolds.

Anno 1643. Brewer or Brower, went another way into the South Sea, by a Passage call'd after his own Name, which is East of le Maire's Streight; but whether Brewer went through a new Streight with Land on each side, or had a wide Sea on the East we cannot inform you, having never seen the Diary of his Voyage; but most Maps make it a new Streight, tho perhaps he might sail under the same Course which Capt. Sharp afterwards did; they who have this Voyage may soon determine this Doubt.

The Southern Part of Terra Magellanica, commonly call'd Terra del Fuego, from the great Fires seen upon it by the Sailors, seems, by the Observations of the Dutch, to be divided into many Isles and Streights leading into both Seas. The Country appears Mountainous, with fair and green Vallies, Springs, Rivulets, and much Herbage. The Creeks are fit for Shipping, Water and Wood being plentiful. The Air is tempestuous by reason of the vast quantity of Vapours from both Oceans. The Natives paint their Bodies, and deck themselves with Shells and Skins. They make their Baskets and Nets of Rushes, out of which they twist Lines, and hanging Hooks made of Stones and baited with Muscles, they take abundance of Fish. Their Knives are made of sharpen'd Bones, and all their Arrows are arm'd with them. Their Canoes are like the Venetian Gondala's. For the Description of the Northern Part of Terra Magellanica, commonly called Patagonia, we refer the Reader to Sir John Narborough's Journal, printed at the beginning of this Collection.

Anno 1669. His Majesty of Great Britain, His Royal Highness the Duke of York, and several others of the Nobility, design'd a better Discovery of Chile; in order whereunto two Ships were sent out under the Conduct of that great Navigator and worthy Commander Sir John Narborough, who return'd June 1671, having been out above two Years, passing and repassing the Streights of Magellan, and coasting Patagonia and Chile. His Observations and Draughts, are the most judicious and exact of any that went before him.

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Anno 1680 and 1681, Capt. Sharp made many bold Adventures on several Islands and Coasts in the South Sea. In his return, he being quite out of all hopes of recovering the Streights of Magellan, or those of le Maire or Brewer, was forc'd to seek for a Passage farther South than by Cape Horn, he went to about 60 deg. S. Lat. meeting with many Islands of Ice, Snow, Frost, and Whales; departing from a small Place, named by him the Duke of York's Island, in the South Sea, he steered near 800 Leagues to the Eastward, and afterwards, as many to the Westward. The first Land he saw in those three Months was the Island of Barbadoes, so that Land in the Streight of le Maire and in Brewer's Passage, must be Islands, and not join'd to any great Southern Continent, as suppos'd by some.

Since these Attempts and Undertakings, several English Ships have pass'd into the South Sea both by the Streights of Magellan, and by the South of Cape Horn; but what Trade they manage in those Parts, or what Discoveries they have made, or what Articles and Treaties they are engaged in with the Spaniard, we cannot inform the Reader, being no Merchants our selves, nor having seen any Journals or Voyages of those Quarters of the World, besides those before mention'd.

In these Navigations to the Streights of Magellan, thro the South Sea, and by the East Indies home again, the common things noted in the several Voyages, (besides the Winds, Longitudes, Latitudes, Variations of the Compass, Tydes, Soundings, &c.) are Flying Fishes, Dolphins, Albacores, Bonitos, Sharks, Tropick Birds; the Sea Weeds
called

call'd Sargassa and Tromba; the Aromatick Tree bearing Winter's Spicy Bark; Cuanacos or Indian Sheep, a Species of small Camels; Infinite Numbers of Penguins, Seals, Mufcles, Whales, Ostriches, &c. These observed in sailing to and through the Streights of Magellan, by the several Navigators aforementioned.

On the Islands in the South Sea, Coco-trees, Plantanes, Bananas, Pine Apples, Indian Figs, Limes, Hogs with Scent-bags on their Backs, a sort of Coney, Monkeys, Goats, Turtle, Almonds of four sorts, Sugar Canes, Oysters on Trees, &c.

Entering upon the Molucco's, Nutmeg Trees with Mace, Clove Trees, Birds of Paradise, and great Heats.

On the Islands of Java, Sumatra and Borneo, the Faufel Palm or Arek, Pepper Shrubs, Betele Shrubs, Jacks, Mango's, Durions, Cajous, Jambos, Papaïos, Arbor Rays, Arbor Triftis, Bambous, Ginger, Cardamums, Lacca Trees, Benzoin Trees, Camphire Trees, Tamarinds, Cassia, Mirobolanes, Cubebs, Costus, Galanga, Bangue, Dutroy, Snakewood, Calambac, Lignum Aloes, &c.

Towards the Gulph of Bengal, Elephants, Rhinoceros, Lions, Tygers, Crocodiles, &c. Upon the Maldives and Ceylon, Maldivy Nuts floating, Woods of Cinamon Trees, Oranges, Limons, Plantations of Rice, great Varieties of Palms, &c.

At the Cape of Good Hope, Hippopotami, Zebras, Gazells, Jacalls, Flammants, Penguins Pelican,

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Pelicans, Orichiches, Cassowares, *vast number of Divers, Duckers, and other Sea Birds, great Varieties of Crustaceous and Testaceous Animals, of Lizards, Serpents, &c.*

At the Canary Islands, several Burning Mountains, Brimstone, the Rhodium Plant, Euphorbium, Dates, Gum Dragon Trees, &c.

But we must note here, that besides and since the aforementioned Navigators and Voyagers, more particular and fuller Observations have been made upon several of those Parts of the World towards the East and West Indies, by Physicians and Others, who have resided long in those Regions, or else received rich Collections from thence. But as to the most Northerly Countries all we have is from the Navigators. The best of whose Observations are all contain'd in the Volume we here publish.

'Tis now high time to hasten to the North, and to give a short Chronological Account of the several Navigations and Discoveries made towards the North East and North West, viz. Nova Zembla, North East Greenland or Spitsberg, and North West Greenland, commonly called Groneland and Engronelandt

A. D. 1380. Nicolo and Antonio Zeni, two rich Venetians, and Brothers, sail'd from Gibraltar, intending for Flanders and England, but by great Storms were driven Northwards to Friseland Iceland, Groneland or Engronlandt, for which we refer the Reader to Hackluit and Purchas.

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A. D. 1497. John Cabot and Sebastian Cabot his Son, Venetians, were sent out of England by Henry VII. These, after their Return, gave an Account and Draught of some North West Parts of America, and brought four of the Natives back with them.

A. D. 1553. Sir Hugh Willoughby went out to discover a North East Passage, and sail'd above 160 Leagues North Easterly from Seynam, which lies in 70 deg. North Lat. 'Tis very probable he landed on Nova Zembla and Greenland, from whence the Cold and Ice forc'd him to return more Southerly, till he came to Arzina, a River in Lapland, where the next Spring that great Man with all his Company were found frozen to Death in the Ship. This Tear the Russia Company began to incorporate.

A. D. 1556. Stephen Burrows searching a Passage by the North East to the Indies, sail'd to 80 deg. 7 min. and thence to Nova Zembla, having been in all likelihood upon Greenland, by the desolate Land, the blue Ice, and great number of various Fowls which he mentions.

About this time the Russia Company was established, and sent Yearly Ships and Factors, and presently after Ambassadors from Queen Elizabeth.

A. D. 1576, 1577, 1578. Sir Martin Forbisher made three several Voyages to find out a North West Passage, in which he made several new Discoveries of great Streights, Bays, Islands and Capes, as well as Land on both sides, to all which he gave Names. His Men brought home great store of glittering Marchasites, which the London Gold-

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smiths took to be Gold Oar. He met with Inhabitants on the Shore of the Streight call'd by his Name; their Canoes were made of Seal-skins at top, but wood Keells: They exchange'd Salmon and other Fish, for Ioyes: In their Tents abundance of Red Beans were found like unto those of Guinea: But more of Frobisher's Observations in our Supplement at the end of this Work.

A. D. 1580. Arthur Pet and Charles Jackman sail'd all over these Northern Seas, and pass'd into Weigats Streights, plying along the East part of Nova Zembla, so far as the Ice would give them leave, and finding no possibility of Passage, return'd back the latter end of the Year.

Anno 1583. Sir Humfrey Gilbert, by the instigation of Secretary Walsingham, sail'd to Newfoundland, and the great River of S. Lawrence in Canada, which he took possession of in the Name of Queen Elizabeth, and settled a Fishing-Trade there.

A. D. 1585. Mr John Davis was employ'd to search out the North West, beyond where Frobisher went; he made further Discoveries in those Parts, which see in Hackluit and Purchas. This Davis made three Voyages to the North West. During his stay at Cape Desolation he found many pieces of Fur and Wool, like to Beaver, and exchanged Commodities with the Country People. Upon the Rocks and in the Moss, grew a Shrub whose fruit was very sweet, full of red Juice like Currants, perhaps 'tis the same with the New England Cranberry, or Bear-berry, (call'd so from the Bears devouring it very greedily;) with which we make Tarts. *Vitis Idæa palustris fructa majore apud Josselin, de Nova*

Nova Anglia. *The Natives often repair'd to him in their Canoes, bringing with them Stag-skins, white Hares, small Cod, dry Caplin; several Copper Oars, Muscles, &c. In his return out of the Fretum Davis (see our Chart of the Northern Regions) he found marvellous store of Sea Fowl and Cod, Woods of Pine-trees, Spruce, Elder, Ewe or Tew, Withy, Birch, Geese, Ducks, Black-Birds, Thrush, Jayes, Partridge, Pheasant, &c. black Pumice-stones, and Salt, kern'd upon the Rocks, white and glittering; Unicorn and other Whales. See more of Davis in our Supplement at the end of this Volume.*

A. D. 1594, 1595, 1596, William Barents a Dutchman made 3 several Voyages to the North East at the Charge of the United Provinces, in the last of which he was compell'd to winter in Nova Zembla, about 75 deg. of North Lat. In these Voyages they discover'd Bear or Cherry Island, and went upon Greenland. These Dutch Navigations were written by Gerart de Veer, and contain great variety of curious Observations, to which Mr Boyle owns himself much beholden, in the composing his History of Cold. They convers'd with, and describ'd the Samoyeds, coasted Nova Zembla, giving Names to several Points, Capes, Bays; Islands, &c. They discover'd the Bernacle Goose or Clakis sitting upon their Eggs, under the 80th deg. North Lat. They give good descriptions of the Whales, Morfes, Birds, &c. and relate Phenomena of Cold (during their melancholy Winter Abode there) with Ingenuity and Judgment.

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A. D. 1611. *That worthy Seaman Sir Thomas Button, Servant to Prince Henry, pursu'd the North West Discoveries at the Instigation of that glorious young Prince He pass'd Hudon's Streight and leaving Hudsons Bay to the South, sail'd above 200 Leagues to the South Westward over a Sea above 80 Fathom deep, and discover'd a great Continent, call'd by him New Wales, where, after much misery and sickness in his wintering at Port Nelson, he beat and search'd the whole Bay with great Industry, (call'd afterwards Button's Bay,) even back again almost to Diggs Island. He discover'd the great Land he call'd Cary's Swan's nest. Many Men were lost during his abode in that River nam'd by him Port Nelson, in North Lat. 57 deg. 10 min. tho he kept three Fires in his Ship all the Winter, and was supply'd with great store of white Partridges and other Fowl, of which his Company is reported to have kill'd 1800 dozen, besides some Deer, Bears and Foxes. On the Shores of those North West Bays grows abundance of Orpine, Sorrel and Scurvygrafs, very much Angelica, whose Root the Gronelanders eat. They kill Morfes, and make their Cords or Ropes of Whalebone.*

In the Years 1610, 1612, 1615, 1626. Mr. Hudson, James Hall, and Will. Baffin, proceeded much further in the North-West Parts, giving Names to their several Discoveries; which may be seen in the Northern Maps, and in the Collection of Voyages, as also in our Supplement at the end.

The King of Denmark observing the progress of his Neighbours in the Northern Seas, began to send out Ships for making Discoveries in the Years 1605,

1606

1606, 1607, but these perform'd little. At last in the Year 1619 he equipp'd John Monk with 2 Ships who tracing Forbisher and Hudson, came to the 63 deg. 20 min. where he was forc'd to winter, and call'd it Munk's Harbour, and the Country New Denmark (it seems to be near Diggs Island) See Muncks Voyage printed in French at Paris ; also our Supplement at the end.

In 1608, Henry Hudson was sent out by the English Company to discover the North Pole ; he proceeded to the 82 deg. of Lat. as did also Tho. Marmaduke of Hull 1622. who saw divers Islands beyond that, and gave Names to several Places in Greenland. He went upon Nova Zembla in June and July, and observ'd Deer feeding here and there on green places, tho at that very time of the Year it freezes in that Climate.

In the Year 1610, the Company began to apply themselves to the killing of Morfes, and to the Whale fishing, which they found most plentiful about Cherry Island and Greenland ; they began also to find those large Bones commonly called Unicorns Horns. In the Years 1611, 1612, 1613, 1614, 1617, 1619, 1620, 1622, the English Company finding those Northern Expeditions so very profitable, encreas'd the number of their Shipping to 13 or 14 yearly, under the Conduct of Poole, Fotherby, Edge, Hely, and others, who gave the Names to several Sounds and Points, &c.

Yet we find little worth relating of Greenland till 1630, in which Year some English commanded by Capt. Goodler were forced to wander up and down the Country, and to Winter there. A full Relation
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The Introduction.

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hereof being Published by Dr. W. Watts, we shall re-
fer the Reader thereunto.

Some English also winter'd in Greenland in the
year 1633. and another Company in 1634; the
most all perish'd there.

In these several Navigations to Greenland, our Men
gave Names to many places, as Hackluit's Headland,
Whale-Bay, Horn-Sound, from the long Boes
called the Unicorns, Ice-Point, Bell-Point, Low-
ess-Isle, Black-Point, Cape-Cold, Ice-Sound,
Mottly-Point, Deer-Sound, Smiths-Bay, Hope-
land, Edges-Island, Wyches-Island, Bear-Island,
Charles-Island. Afterwards the Dutch gave other
Names of their own to these Places, which has bred
some confusion in Maps and Books.

Our Men that winter'd in Greenland, 1630. lost
the light of the Sun October 14. and saw him not
again till February 3. Those that staid there in
1633, say, that October 5. was the last day they per-
ceiv'd the light of the Sun, tho they had a twilight,
in which they could read, till October 17. On the
18. the Stars were plain to be seen all the 24 hours,
and so continu'd all Winter. Jan. 15. they perceiv'd,
for 6 or 7 hours about noon, so much light as to
read by it. Feb. 12. they saw the Rays of the Sun
on the tops of the Mountains, and the next day his
whole Body. Our Men that remain'd in Greenland,
1634. left in writing before they perish'd, that the
Sun disappear'd October 10. and was seen again
Feb. 14. The Dutch that winter'd in Nova Zem-
la in 1596. lost the Sun on Novemb. 4. but the
Moon in her highest degrees was seen night and day.
M. 24. they saw the edge of the Sun above the Ho-

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rizon. The difference of these appearances, doth proceed from different Refractions, but from the difference of Latitude, in which the English and Dutch winter'd, tho the cold in Nova Zembla exceeded that felt in Greenland. In these Countries there is a continu'd Day for four or five months in the year, as well as a perpetual Night for three months so for the Most part there is either all Light, or all Darknefs.

The English that were necessitated to winter in Greenland, liv'd upon Venison (of which there was great store, perhaps 'tis of the Rhin-deer) upon Mole, Iles, Bears, Foxes, &c. The Bears Flesh was tolerably pleasant and wholsom, but the Liver made the skins peel off; which was also observ'd by the Dutch that winter'd in Nova Zembla. As the Sun and Day-light began to appear, the Fowls and Foxes crept abroad, for which they set Traps and Springs and so took vast numbers: The Foxes prov'd wholesome Food, for by it the Dutch were also reliev'd of their Scurveys. In May they found great store of Eggs laid by Willocks. The cold had prodigious Effects on our Men in Greenland, and on the Dutch in Nova Zembla, as blistering and ulcering the Flesh, freezing their Sack and Spirits, stoping the Clocks, freezing every thing by the fire side; all which Captain James suffer'd in the Island of Charletoe tho only in the 51 Deg. of North Lat. whereas the English and Dutch winter'd in 75 and 78 Deg. of North Lat. In the building of Houses, Tents, and Cabins, upon these melancholy occasions, 'twas found expedient to make them under ground, and to line them with the skins of Beasts, thereby to keep out the sharp impressions of the air.

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Authors are a little confus'd in the History of Whales, some reckon up 10 Species, but Wormius and Birtholine, make them up 22. giving them various Names from their difference in Colours, in Fins, in Teeth, in Whalebone, in Spouts, in Oyl, Sperma Ceti, &c. Rondeletius, Gesner, Belonius, Schonveld, Faber, Clusius, and Tulpus, seem indeed to describe 6 or 7 distinct sorts of Whales, the Balæna Vulgaris, the Balæna Vera, theorca or Balæna dentata, (perhaps our Grampus,) the Physter or Whirle-Pool, the Cete or Pot-Walfish, the Monoceros or Unicorn Whale. The Trumpa Whale or Spouter, may perhaps be the Physter, and the Sperma Ceti Whale the Pot-walfish, tho the Spout and Sperma Cety may be common to many of them. We read in the Philosophical Transactions, Num. 205. an Account of Whales by Sir Thoms Sybbalds, who has had opportunities of viewing them on the coasts of Scotland, and therefore seems to be more exact than other Writers; but we having never read his Book, must be content to refer the Reader to it; expecting in the mean time more clear distinctions between them from the Excellent Mr. Ray, in his intended Synopsis of Fishes and Birds.

Anno Dom. 1653. The King of Denmark resolv'd to advance the Northern Trade and Discoveries, and therefore equipp'd, and set out three Ships, with Orders to take the most exact account of all the coasts and Places they came at, and to report them on their return with all possible Curiosity, that the Voyage might be every way beneficial. They pass'd the Weygat Streights, and found some Inhabitants of Nova Zembla in their Canoes, or little

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Fishing-Boats : These people were very nimble on Foot, and cloathed with Garments of the Skins of great Birds, like Penguins, and Pelicans, with the Feathers upon them. Their Boots were made of the Hides of Morfes, or great Seales; they had Quivers at their Backs full of Arrow's, with a Hatchet of Fish-Bones; their Temper untractable and indocile, abhorring our Beer, Spirits, and Meats. Leaving Nova Zembla they steer'd to Greenland. These Countries afford no Trees, or Shrubs, except a little Juniper, and a few dwarf Firs; abundance of Moss, Heath, a sort of Cabbage, Lettice, Scurvygrass, Sorrel, Snake-weed, Harts-tongue, a kind of Strawberry, divers species of Ranunculus, and Houseleek. In the Holes and Rocks infinite quantity of Fowls Nests, whose dung with the moss wash'd down makes a mould in the Valleys or Clefts, which produce the aforementioned Plants; otherwise the Country is generally made up of vast heaps of Rocks, broken Stones, and Ice heap'd up from many Generations.

Of Water-Fowl there is incredible variety, and in so great abundance, that with their flight they darken the Sun, and cover the Sea. There are also great quantities of Dog-Fishes, Lobsters, Gernels, Star-Fish, Mackrel, Dolphins, &c. a sort of Sea-Spiders found in Whales Stomachs. For all which see the French Relations of the Danish Voyages, Printed at Paris both by M. Peyrere, and Martiniere.

Anno Dom. 1630. Captain Luke Fox was sent out in His Majesties Pinnace the Charles, Victualled for 18 Months, young Sir John Wolstenholme being Treasurer, to search out a North-West Passage.

He traced Frobisher, Hudson, Davis, Baffin, and Button;

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utton; meeting with Whales, much Ice, and Fowls. He built a Pinnacle in River Nelson, where he found several remains left there by Sir Thomas Button: He observ'd abundance of small Spruce Fir-Trees on both sides that River almost cover'd with moss, and other sorts of Trees, but small; the Valleys had good grass, Black-Berries, Straw-Berries, Vetches, Venison, &c. but no Natives or Inhabitants to be met with in this place, tho' in other parts of these Seas he saw several Savages. Captain James departing from England soon after Captain Fox, upon the same design, they both met and caress'd each other near Port Nelson, in the month of August. Fox got home before winter, but the other was forc'd to stay till the next Summer. Of which more in the following Paragraph, and in our Supplement at the end.

Anno 1631. The most ingenious Captain Thomas James was imploy'd by the inquisitive Merchants of Bristol, to attempt and discover a North-West Passage into the South-Sea, and was design'd for so difficult a work by King Charles the First; who was pleas'd to command him to publish his Voyage in the Year 1633. wherein he gives a very accurate and judicious Accounts of the hardships both in going, wintering, returning; as also of the Streights, Capes, Bays, Tydes, Soundings, Variations of the Compass, and of the Natural Rarities both Philosophical and Mathematical, together with a Plat or Card, and divers Tables. Out of this Journal Mr. Boyle confesses that he took many Passages and Phenomena related in his History of Cold. This excellent Navigator seems to be of opinion, that there is no passage by the North-West to China, Japan, &c. His

The Introduction.

Reasons may be read at large in his Journal printed at London, in Quarto, 1633. Yet in the year 1667. this design was renew'd, and undertaken by several of the Nobility of England, and Merchants of London, who equipp'd and sent out Zachariah Gillam Commander in the Nonfuch Ketch: he pass'd through Hudson's Streights, then into Baffin Bay, to the Latitude of 75. from thence Southward to the Lat. of 51. or thereabouts, in a River now call'd Prince Ruperts River: He found here a friendly Correspondence with the Natives; built a Fort called Charles Fort; return'd with good success; and laid the Foundation of an advantageous Trade in those parts. But in the year 1687. this place was seiz'd upon by the French. See more of Captain James's Voyage and Discoveries in our Supplement at the end.

Anno 1671. Fredrick Martens, an Ham'bourger, undertook the Greenland Voyage, upon a desire, as may be suppos'd, in great part to satisfy the Curiosity and Enquiries of the Royal Society; which he perform'd in his admirable Diary printed in High Dutch in Quarto, being assisted therein by the famous Fogelius.

Anno 1676. The industrious and most ingenious Captain Wood, was again sent out by his Majesty King Charles the Second, to make a more perfect Discovery of the North-East Parts for a passage to the East-Indies: He went no further than the 73^d Degree of North Lat. where he lost his Ship on the Coast of Nova Zembla. His opinion is, there is no sailing this North-East Way to China, Japan, &c. The like opinion Captain James hath given of

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*the North-West Passage, being both perswaded there-
into by the stretching of the Land, by the distra-
ction and reversion of half Tides, by the motion
of the Ice, &c. besides the Fogs, Snow, Frosts, vast
Islands of Ice, and the Weather, are insuperable.*

*Mr. Witsen in his Letter to the Royal Society,
Anno 1691. writes against the North-East Passage
to Japan: He retract's his former Opinion of making
Nova Zembla join upon the Continent with Tar-
tary, having since been better inform'd. He thinks
the Tartarian Points may run very far North, and
perhaps reach to America. Captain Wood fancies,
that Nova Zembla and Greenland are the same
Continent. If these Conjectures of Captain James,
Captain Wood, and Mr. Whitsen, concerning the
North-East, and North-West Passages to the
East-Indies should not be true, yet the difficulties of
sailing those ways would be invincible.*

*But now it seems convenient to come to the pre-
sent Work, and to give an account what is con-
tain'd therein. The Authors are Four, viz. Sir
John Narborough, Captain Jansen Tasman, Cap-
tain Wood, and Fredrick Marten.*

*I. Sir John Narborough is so well known in
England, and so famous beyond the Seas, that I
need say nothing of his great Abilities. His
Voyage into the South-Sea is mention'd before.*

*II. Captain Abel Jansen Tasman's Voyage from
Batavia in the Island of Java, to the South Terra
Incognita is the more considerable, in that 'tis the
Discovery of a New World, not yet known to the
English.*

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'Tis probable by Abel Janſen Taſman's Navigation, that New Guinea, New Carpentaria, and New Holland, are a vaſt prodigious Iſland, which he ſeems to have encompaſs'd in his Voyage, ſetting out from Batavia to Maurice Iſle, Eaſt of Madagaſcar ; from whence bearing away South to 49 deg. of South Lat. and then Eaſt and by North to Lat. 42 and 44, he fell upon thoſe new Tracts of Land call'd Van Diemen's, and afterwards upon New Zealand, to the South Eaſt of New Holland ; returning to Batavia through part of the South Sea (wherein he Discover'd new Iſlands) and ſo Northwards of New Guinea to the Molucco's, and Java.

III. Captain Wood was a moſt excellent Navigator : He, together with Sir Cloudſly Shovel, accompany'd Sir John Narborough to Chil, Afterwards he was ſent by King Charles II. to Discover a North-Eaſt Paſſage to China and Japan by Nova Zembla and Tartary ; of which you have here an Abſtract.

IV. Fredrick Marten of Hamburgh Publiſh'd his *Observations made in Greenland in the High Dutch, a Language little underſtood in England.* His Voyage being the laſt and beſt was much deſir'd here, it being full of Draughts and curious Remarks ; the Copying and Translating of which, are perform'd with all poſſible diligence.

Theſe four make up the Volume, together with many new Carts and Deſigns, drawn upon the ſeveral places, which do much illuſtrate the Work, and improve both Natural and Mathematical Science. To theſe we thought fit to tack a Supplement containing ſome Observations on Groneland, or Engro-neland,

Ireland, as also upon some Northern Islands, North-East, and North-West.

'Tis to be lamented, that the English Nation have not sent with their Navigators, some skilful Painters, Naturalists, and Mechanists, under publick Stipends and Encouragement as the Dutch and French have done, and still practise daily, much to their Honour as well as Advantage. The English have Capacity, Industry and Judgment in these Matters, equal to, if not beyond their Neighbours, Sint Mæcenates. We are apt to imitate a certain Prince in every thing, except in the most glorious and best Part of him, viz. The Encouraging and Rewarding great Men in all Professions, and the promoting Arts and Sciences with his Treasure: A Secret which some Ministers think not fit to practise, or perhaps may be insensible of, for want of penetration. This makes a great Figure in the present and future Ages, covers many Spots and Deformities, and secures the best Heads, and Hands to carry on, and effect great Designs.

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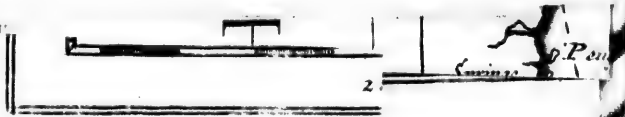
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Describing the Course of
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Voyage to the
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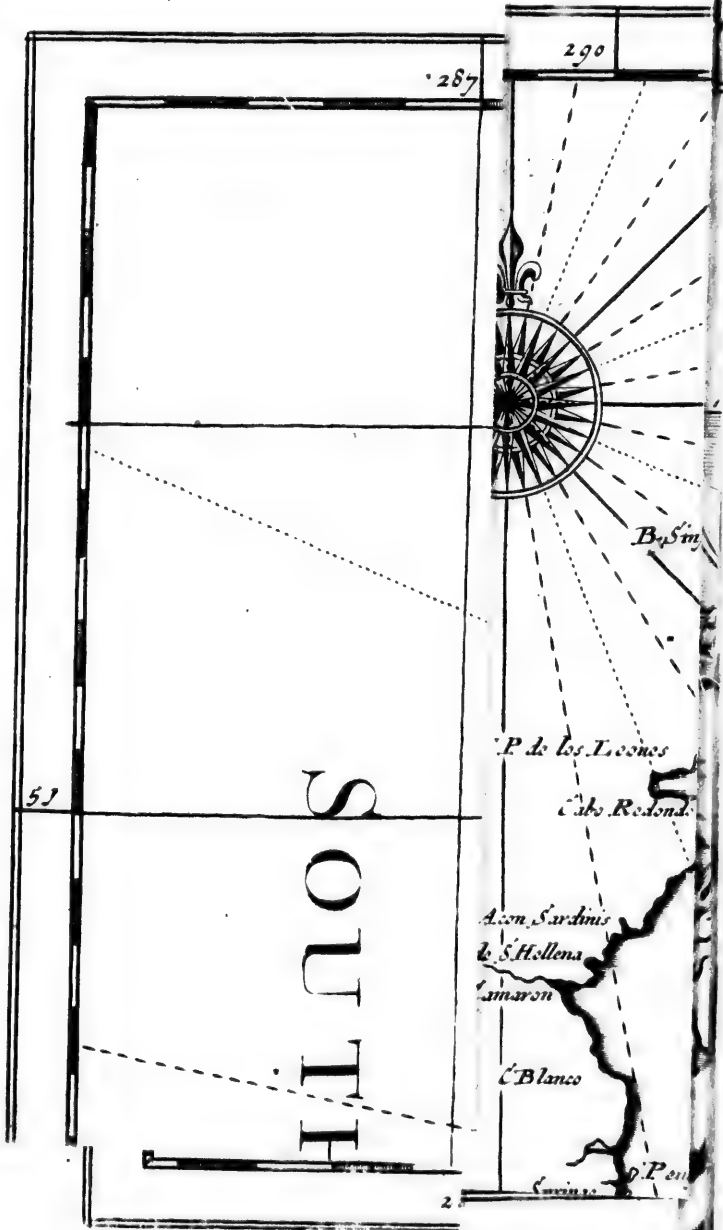




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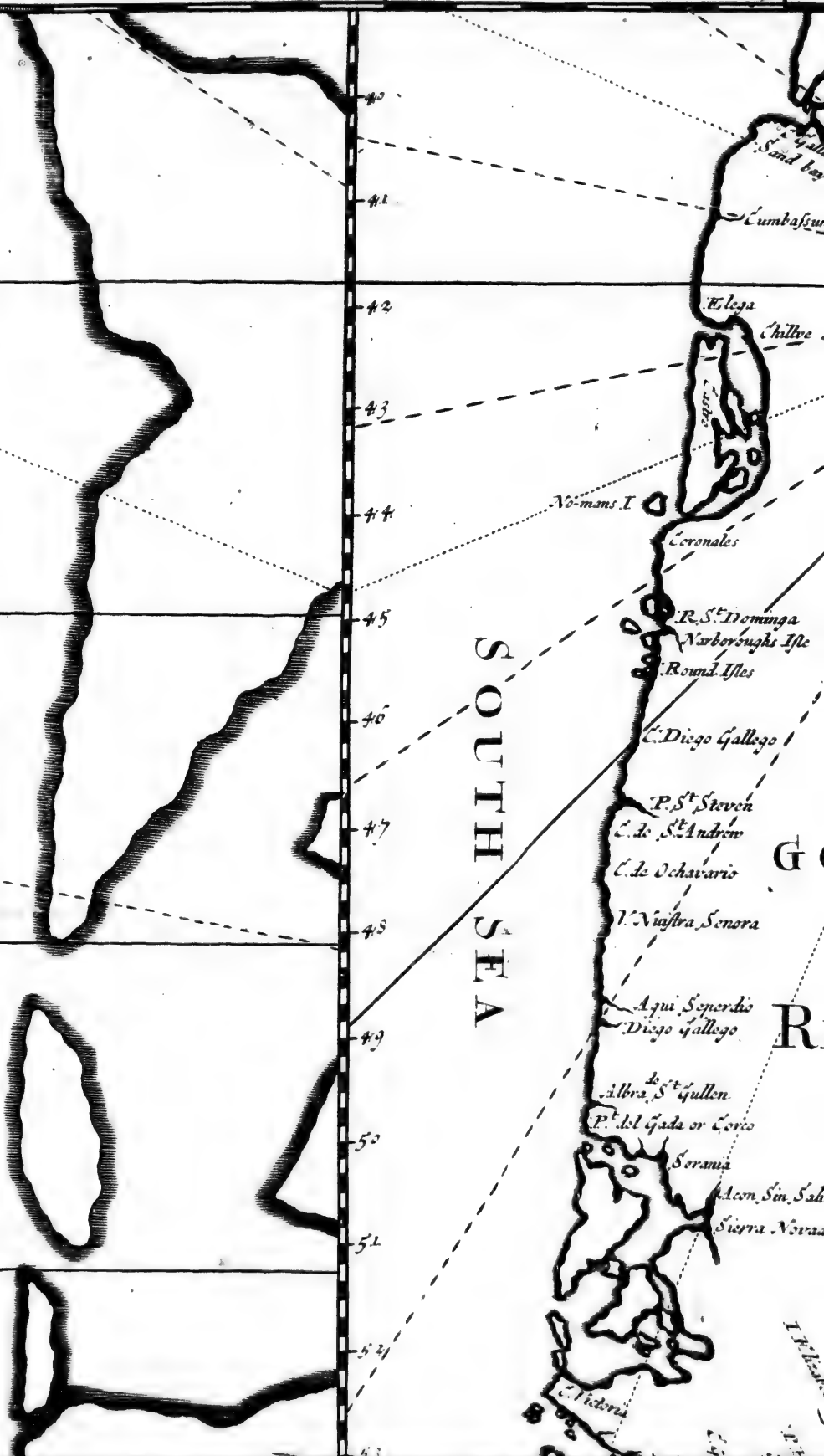


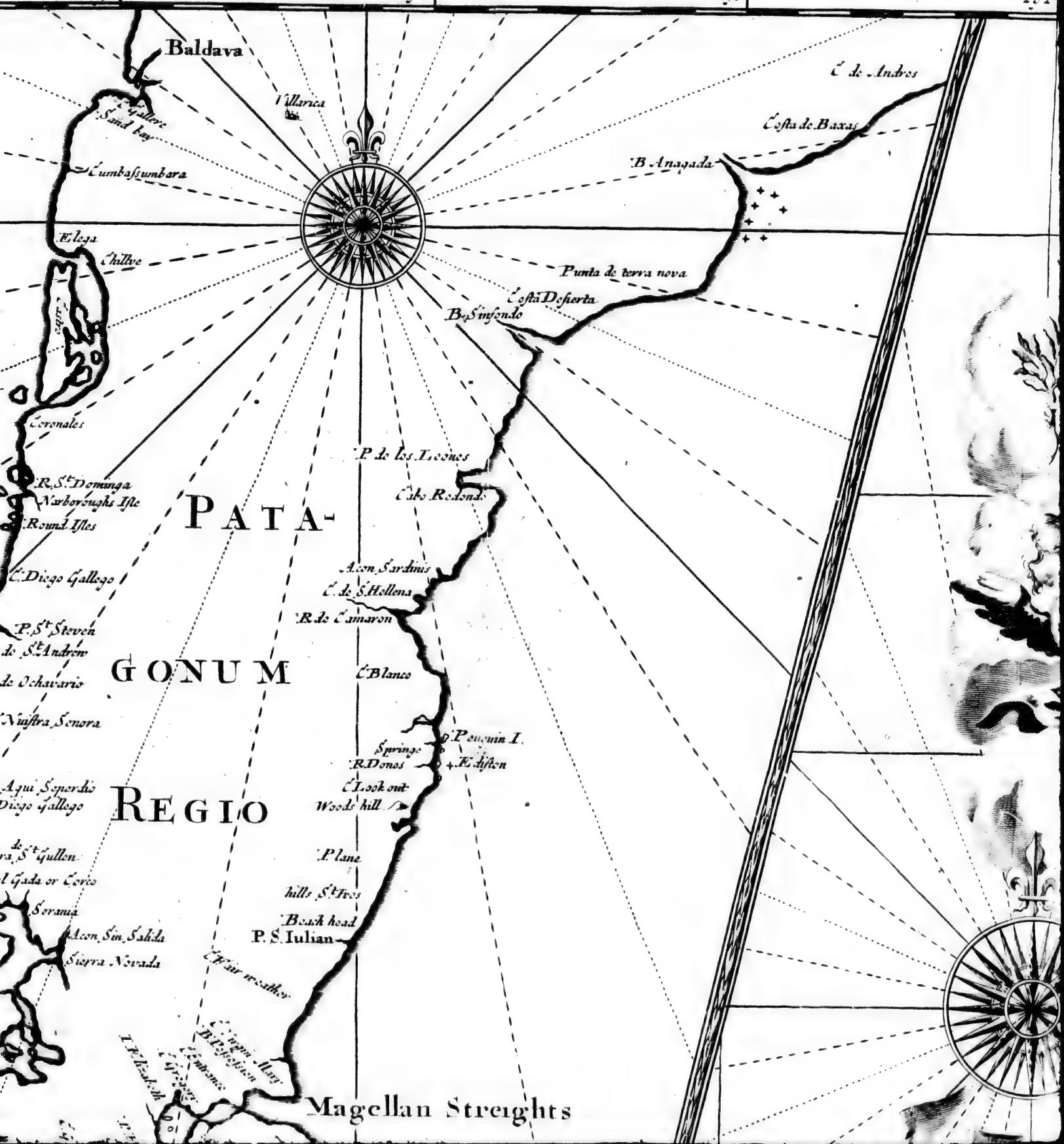
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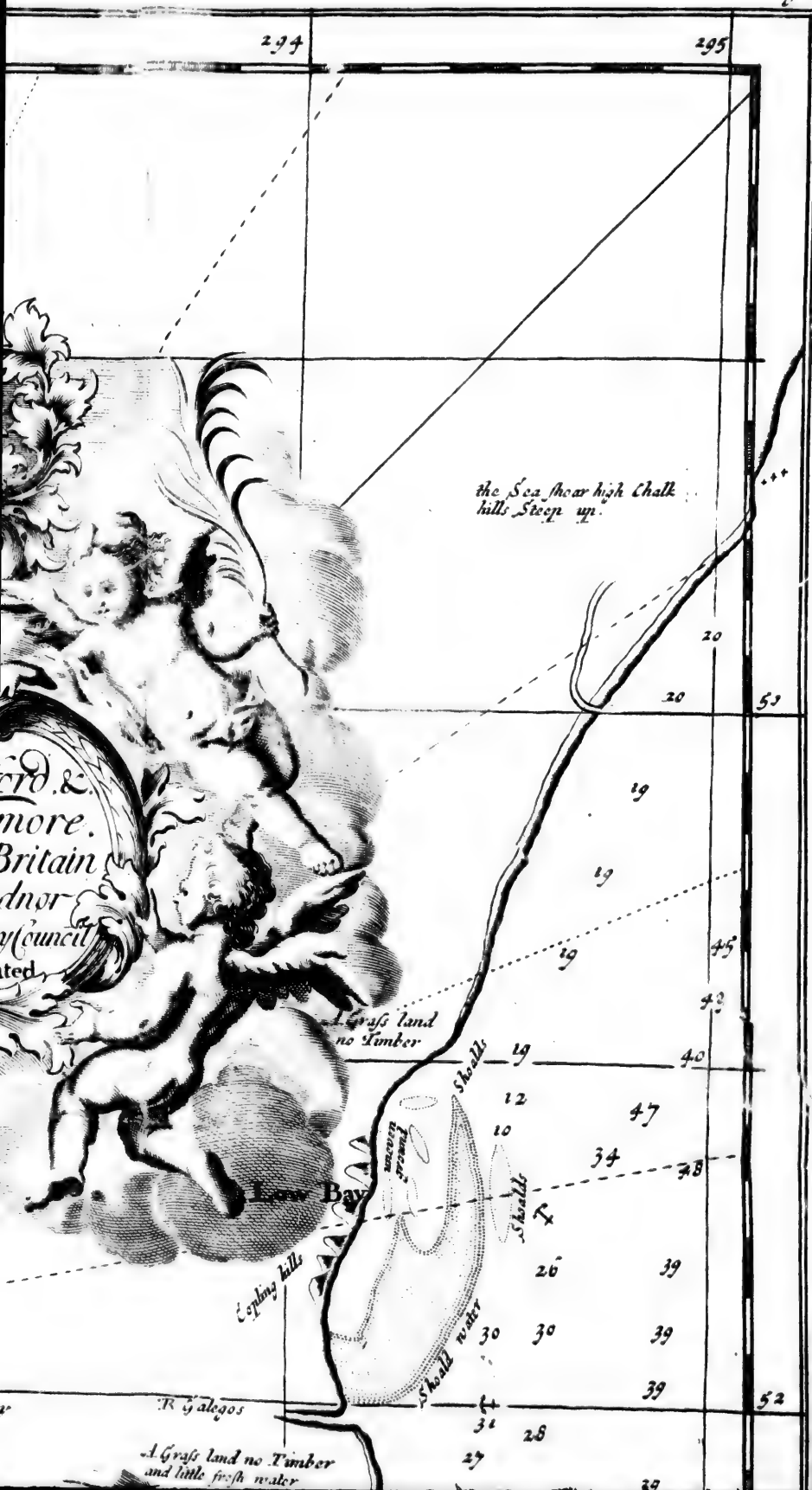
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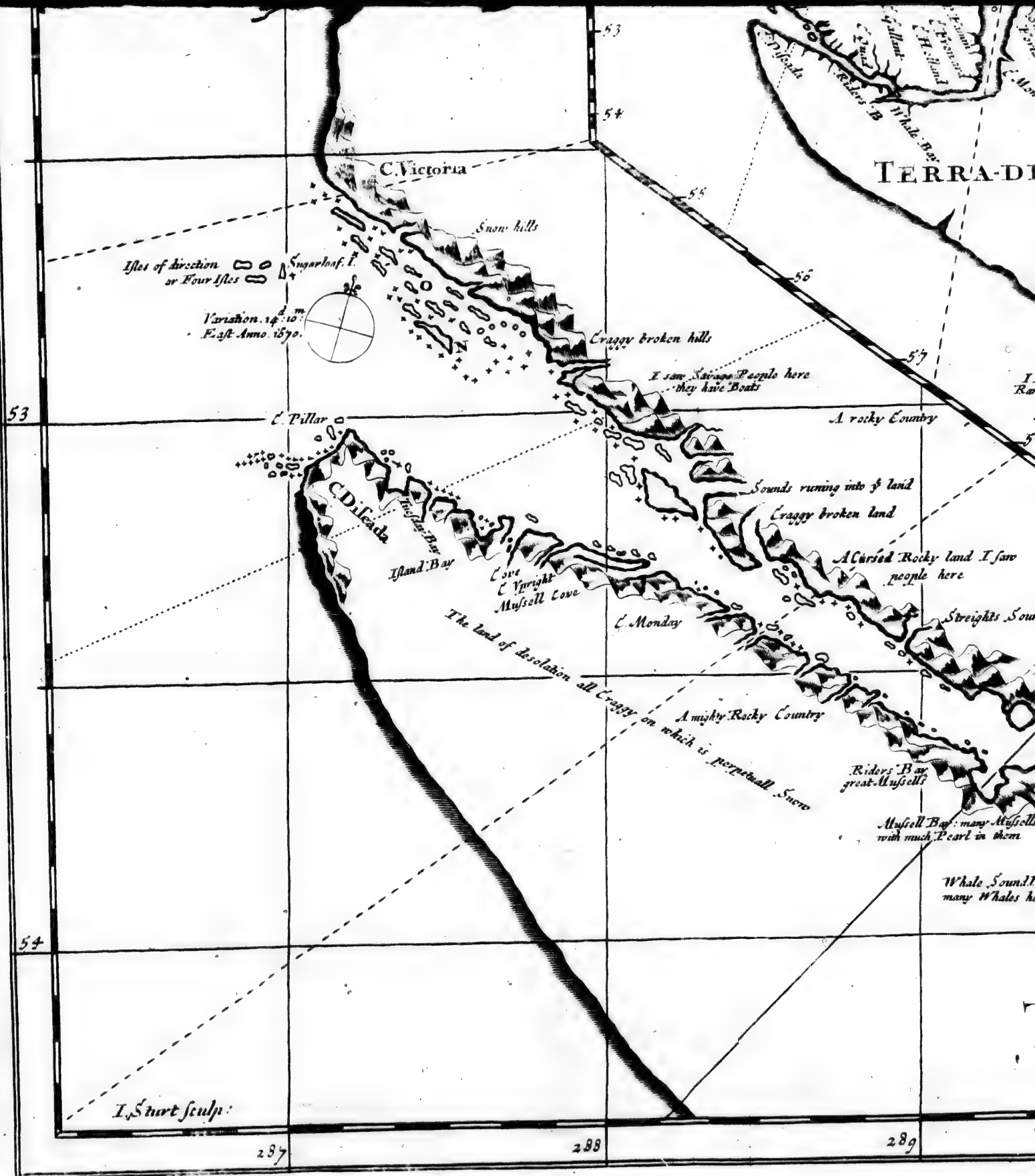




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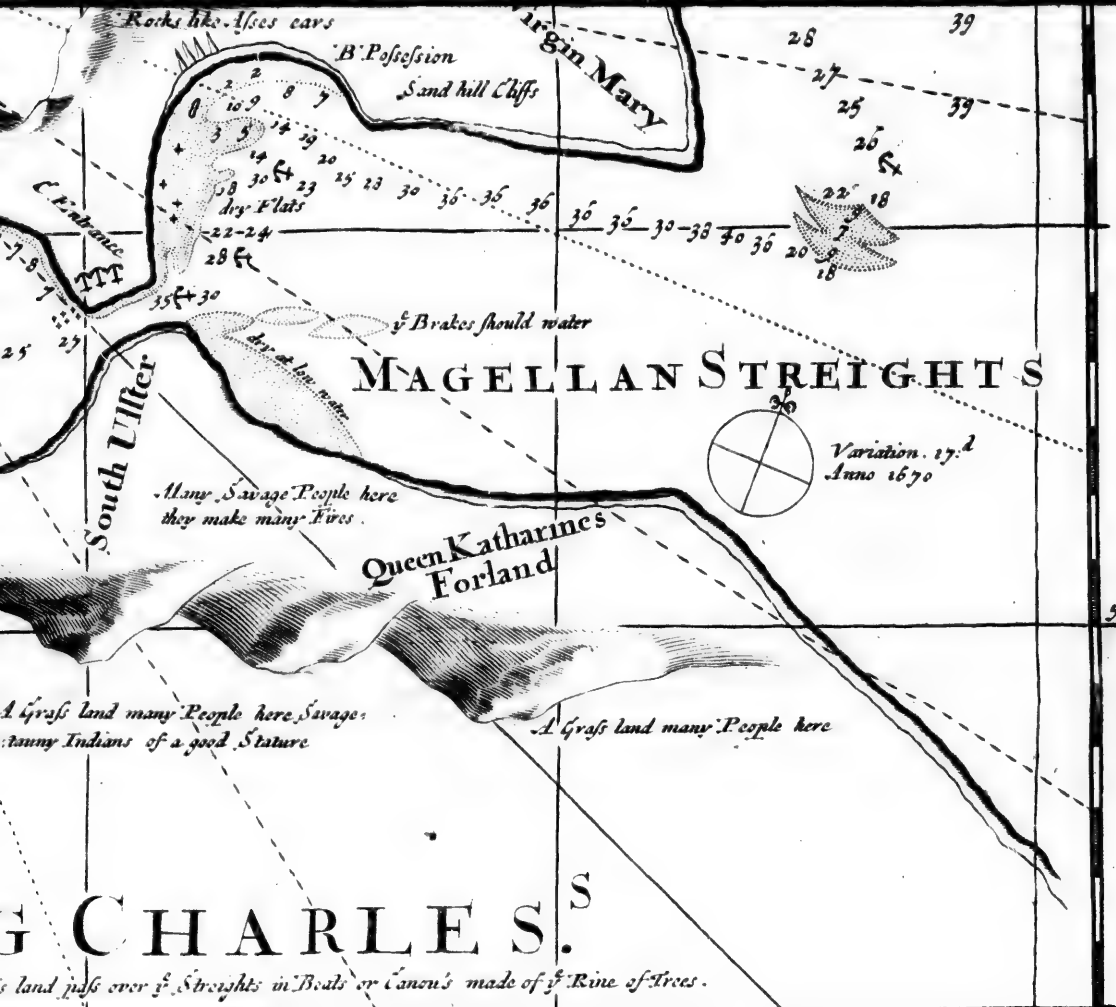






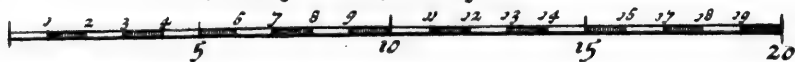






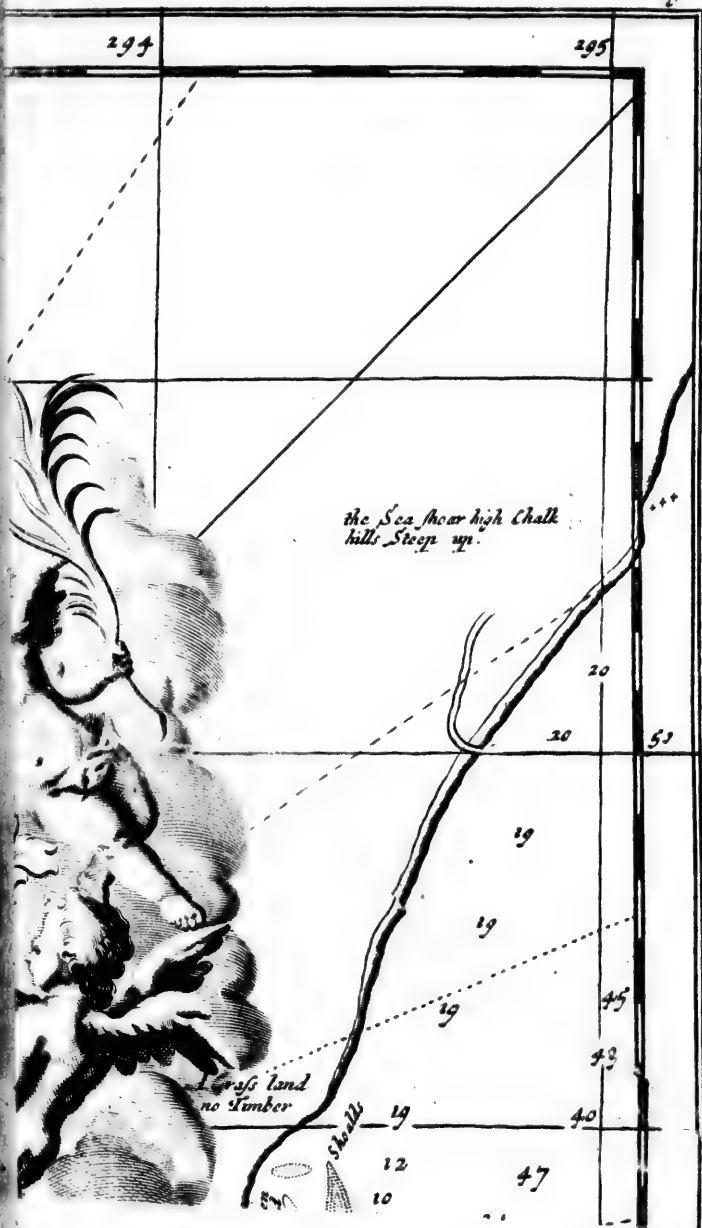
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A Scale of twenty Leagues.



Names of Several Islands in the Straights.

- | | |
|---------------------------------------|------------------------------|
| A. Elizabeths Isle a grass land. | H. Lord Arlingtons I. |
| B. St. Bartholemews I. or Penguins I. | I. Earle of Sandwichs I. |
| C. St. Georges I. or Penguins I. | K. Secretary Wrens I. |
| D. Charless I. regular Wood land. | L. Whale Point. |
| E. James I. a great deal of Wood. | M. Middleton. |
| F. Monmouth I. a great deal of wood. | N. Westminster I. a rocky I. |
| G. Ruperts I. wood. | O. The Lawyers I. all rocks. |



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JOURNAL

KEPT BY

Captain *John Narborough, &c.*

MAT 15. 1669. This day being *Saturday*, I received from the Honourable Mr. *Wren*, Secretary to his Royal Highness the Duke of *Tork*, my Commission to Command his Majesty's Ship the *Sweepstakes*, the Ship being at *Deptford*, in the River of *Thames* near *London*.

Sunday, September 26. 1669. Set out at his Majesty's proper Cost, one of his own Ships nam'd the *Sweepstakes*, Burthen 300 Tuns, with 36 great Ordnance, and all other Munition proportionable; manned with 80 Men and Boys, victualled for fourteen Months, at whole allowance of all Provisions both good and wholesome, having Oat meal for Fish, and four Tuns and an half of Brandy in lieu of Beer, stores of all sorts compleat for twelve months, with provision of Craft to take Fish and Fowls, a *Seyne* Net, and hooks and lines, and faggots, and harping Irons, twelve Fowling-pieces,

B

with

2 Sir John Narbrough's Voyage

with shot, and pigs of Lead to make shot, if occasion; &c. And the *Batchelour Pink*, burthen 70 Tuns, with four great Ordnance, and all other Munition proportionable; mann'd with nineteen Men, one Boy, victualled for twelve months, at whole allowance of all provision good and wholesome, as the *Sweepstakes* had, and stores proportionable for the time, and Craft to take Fish and Fowl, &c.

Having a sort of Goods to the value of three hundred pounds, as followeth *Knives Siffers Glasses, Beads, Hatchets, Bills, Hoes, Nails, Needles, Pins, Pipes, Bells, Boxes, &c. Daffels Linnen, Cloth, Osenbrigs Tobacco, and Pipes, &c.* to trade with the Natives at his Majesty's Charge.

Wednesday, September 29. Hazy Weather, the Wind to the North-west and by West, a fresh gale: I stood to the South-westward as near as I could; this day at 12 a Clock the *Lizard* bore North of me a little Easterly, distance about 12 Leagues, according to my account; Latitude by account, is 49d. 35m. This day I spoke with a *French Banker, Lizard in England* lies in the Lat. of 50 d. 10 m. and in Longitude East, from the Meridian of the West part of *S. Michael*, one of the Islands of the *Azores* 18d. 30 m. From the *Lizard* I take my departure, and keep my daily account of the difference of my Longitude from that Meridian.

October 17. I made the *Madera*, which Island is high Land and irregular in Hills, with Wood on the top, and down the sides; planted with Vines: there is some Sugar made in the Island: the Inhabitants *Portuguezes*. The City of *Fonchiale*

is the *Metropolis*, and is situated in a Bay on the South Part of the Island, close to the Sea-side, walled next the Sea, and well fortified with Ordnance; fresh water comes running into the Sea in the middle of the Bay, in a fair Rivulet from under an Arch in the Wall; the shoar sides are great Pebble stones in the Bay, and Rocks in the other places; the Road is foul ground to the East part of it: the ships ride in shot of Ordnance of the City: this City is about an *English* mile in length, and three quarters of a mile in breadth.

The Desarts are barren rocky Isles of a good height, and lie at the South-east point of *Madera*, above a mile distant from the shore; there is water enough between *Madera* and the Desarts in the midway, and no danger; the Desarts trent to the South east. *Fonchiale* Bay in the Isle of *Madera*, lies in the Lat. of 32 d. 10 m. North, and in Longitude West from the *Lizard* of *England* 10 d. 1 m. and Meridian distance 143 Leagues.

Sunday being the 17th. fair Weather and little wind at North-west, Course by my Compass South west. I make my true Course by *Fonchiale* Bay, till to day at noon South south-west, distance, sailed 34 miles six tenths departure West 13 miles; Diff. Lat. 00 d. 32 m. Lat. by account 31 d. 38 m. Meridian distance from the *Lizard* West, 147 leagues 1 mile; Longitude from the *Lizard* West 10 d. 17 m. Difference of Longitude from *Fonchiale* West 00 d. 16 m. To day at noon I saw the Island of *Madera* bearing N. b. E. the body of the Isle distant by estimation 11 leagues; it makes a bluff body at the West end, and trents to the

East : Course by the Compass this afternoon S.W. little wind to night ; I shaped my nearest Course for the Island of St. Jago with all the sail I could make, the *Batchelour Pink* in Company ; I gave order to my Master to make the best of his way to St. Jago Island, but not to leave the Company of the *Batchelour*.

Saturday, October 23. The wind at N.b.E a gale: this day in the forenoon I crossed the *Tropick of Cancer*, all my men in good health, I praise the Almighty God for it : many of my men that had been with me in the *Indies* formerly, were let blood ; for I take bleeding in these hot Climates to be a great preserver of health, diverting Calentures ; I experienced it in two Voyages before to the Island of St. *Helena*, and in one to the Coast of *Guinea*, where several of my men under that distemper, were preserved by bleeding ; in all these Voyages I was never sick one day, nor in two years time in the Mediterranean Sea, nor at the *Canaries* ; for when I came near the *Equinoctial* I always breathed a Vein.

Thursday, October 28. the Wind at East-North East, a stiff gale ; this Morning I saw the Isle of *Mayo* bearing S. b. W. distant by estimation eight Leagues ; it makes a high Hill, and Craggy to the East part, and low land towards the shore-side to the North west part of the Island ; it lies from *Bonavist* S. b. W. distant near 18 leagues. This day at 11 a Clock I anchored in the Road in seven fathom water, sandy Ground, about a mile from the shore ; the Northernmost point of the Road bearing N.N.W. half a point to the West, and the South

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thern point of the Road bearing South east from me; distant about a mile and an half; there are craggy Rocks to the South of the Road on the shore side, but to the North a low sandy shore; the Road is on the North west and by West part of the Island in a small sandy Bay; there's the Salt-pond a bow's shot from the Sea in the low fiat Land; fresh water is very scarce here: I went ashore presently after I had anchored, and found a heap of Salt of about 20 Tuns; I got aboard again immediately, and sent the Long boat ashore, which brought off 2 Tuns and $\frac{1}{2}$; the Suff came in so much that no more could be got off; we halled the Seyne here, and caught abundance of good Mullers, with some *Cavalle* and silver Fish; one of the Islanders a *Negro* came aboard, whom I sent ashore to tell the People that if they brought down some Cattle I would buy some of them; I rode here all Night; fair Weather, the Wind Easterly. This side of the Island is dry land without wood; here are many Goats, and Guinea Hens.

Friday, *October* 29. fair Weather, the wind at N.E. a fine gale: this Morniag I sent my Boat ashore, and bought of the Islanders some Goats at a piece of Eight per Head, and 8 Cows, excellent good meat, at 6 pieces of Eight a Cow, giving the skins again; my men caught a great many Fish with the Seyne, which this day we split, and laid in pickle four Hours, then dried them to keep, which, they will a long time in any Climate. as I have experienced in other Voyages. and are very good Victuals at Sea: I made what dispatch I

6 Sir John Narbrough's *Voyage*

could to be gone for *St. Jago* Island. This day in the forenoon, a ship passed by to the Westward on the south side of the Isle, and in the afternoon we saw several ships coming from the Northward, which were the *Portugueze Fleet* bound for *Brazil*; they halled into *Port Praya* in the Isle of *St. Jago*, to water: this night I weighed, and stood away at twelve a Clock South south west for *Port Praya*, with the *Pink* in company: I touch'd at the Isle of *May* for Salt, which I knew would be a great help to get Provisions in the Voyage.

Saturday, October 30. fair wind at North east and by North, a fresh gale. This Morning I steered South west for the south side of *St. Jago*, where is the Road of *Port Praya*, lying near South west from the Road of the Isle of *May*, and distant nine Leagues. This day at 12 a Clock I cast my best Bower anchor in *Port Praya* Road, in ten fathom rough Ground, the East Point bore East of me, and the West Point about West south-west, about half a mile off: I could not get into the best of the Road, the *Portugueze Fleet* of about thirty six sail riding in it: the Great *Padre Eternel*, Admiral, bound for *Brazil*, is a very great ship, and well built; they say she is in burthen 1700 Tuns; she hath Ports for three Tier of Guns flush, but now she had but eighty, and poorly manned with Seamen, and so were all the rest; six Frigots might have taken most of the Fleet. At my coming in to Anchor, the Admiral saluted me with 7 Guns, I thanked him with as many; Captain *Francis Wilksheir* in the *Jerusalem*, fired five, I returned him

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him three; so did the Reer-Admiral, and I return'd the Complement in the like number; several of the Fleet fired three, whom I answer'd in conclusion with three for all. I rode on the broad side of the Admiral, and saluted the Fort with five Guns, which return'd three; then I sent my Lieutenant ashore to ask leave of the Governor to water, which he granted forthwith; my Coopers got the Cask ready, and this Evening put one Boat's lading aboard.

Sunday, October 31. fair Weather, the wind at North east, a fine gale. This morning *Don Carolus* went ashore to *Pryam*; with much ado I got off a Boats lading of Water, for the *Portugueze* Boats were filling too, and a great many Soldiers at the watering place snatch'd some of our mens Hats off, and run away; wherefore I would not let my Men go any more this day for fear of quarrelling. This Bay of *Port Praya*, as they call it, is no Port but a fine round Bay, having high steep Cliffs on the East side, and in the bottom a steep Hill where the Castle is, that hath but four Guns, and is of no force; there is a small Fort on the top of a Hill on the East side, which hath three Guns. On the North west part of the Bay the shore is gravelly and sandy, and there's a Grove of Coco nut trees: A fresh water Rivulet runs down into the Valley, and thence thro' the Sand soaks into the Sea: this Water is in great quantity, very good, and keeps well at Sea: to the West part of this Bay lies a small Island close on the shore, which has Grass on it that may be cut off for Cattle, which I did; this Road is no safeguard for shipping; for a Man

of War may take any Ship out of the Bay, without receiving any damage from the Forts ashore, and with Fire-Ships a whole Fleet may be spoiled at pleasure; for it's a fresh Gale every day, and there's but two points of Land by which a man may fetch into any part of the Bay; also the Bay lies open to the Sea from the East, Southerly to the *W.S.W.* I called for my Lieutenants and Master, and acquainted them, that I had Orders to sail from thence to the Coast of *America* to the Southward of the River of *Plate*, to the Streights of *Magellan*, through which we were to pass into the South Seas, and that we must shape our Course to make the shortest way of it, and be careful to keep Easterly enough of it, to weather the shoals of *Brazil* called the *Abroholls*, lying in and about eighteen degrees of Southerly Latitude; for the Wind blows for the most part thereabouts between the Latitude of ten South, and the Latitude of twenty South, at East by South, and East South-east fresh gales: whilst this pass'd, in came the Master, and told me all things were flow'd, and the Wind at *E.b.N.* fresh; I concluded with him that our best Course at present would be South and by East, and as we got Southerly and the Wind grew large, we might alter our Course when we would: we steered a Point or two from the Wind, that the ship might have fresh way through the Sea. I ordered my Master to steer South and by East by the Compass, and my Lieutenant to call all hands to Prayer, read Service, and beg'd of God Almighty a prosperous Voyage, continuance in Health, and love to one another, *and that we might prosper in this Undertaking, &c.* In-

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Instructions for Mr. *Humphrey Fleming*, Commander of his Majesty's hired Pink the *Batchelour*; By vertue of an Order from *His Royal Highness*, dated the twenty ninth day of *August* 1669. to me directed.

YOU are hereby required to sail with his Majesties hired Pink the *Batchelour*, which you are Commander of, and to keep Company with his Majesties Ship the *Sweepstakes* to the Coast of *America* to the Southward of *Rio de la Plata*, and along the Coast of *America* to the Southward, till you come to the Streights of *Magellan*, lying in about 53 Degrees of South Latitude; through which you are to pass into the South-Sea, and sail along the West Coast of *America* Northerly, till you come as high as *Baldavia*, which lies in about 40 Degrees of South-lat. there you shall receive further Orders from me, or in my absence, from the Commander in Chief on board his Majesties Ship the *Sweepstakes*, in case you keep Company with her, whose Company you are not to depart from or leave upon any occasion whatsoever, as you will answer the contrary at your peril, unless you have Order from me so to do, or in my absence from the Commander in Chief on board her; You are also to understand, that you are to be employed by me as I shall see occasion to employ you, to discover Lands, Bays, Havens, Rivers or Streights, &c.

The

The design of this Voyage on which you are employed, being to make a Discovery both of the Seas and Coasts of that part of the World, and if possible to lay the Foundation of a Trade there. You are not to meddle with the Coast of *America*, nor send on shore, unless in case of great necessity, till you get to the Southward of *Rio de la Plata*; and you are not to do any injury to such *Spaniards* as you shall meet with, nor meddle with any place where they are planted: You are to take Observations with as much Accuracy as you can, and also to cause your Mate and Company to do the like, to observe all Headlands, Islands, Bays, Havens, Roads, Mouths of Rivers, Rocks, Shoals, Soundings, Courses of Tides, flowings and settings of Currents, where you come, both in the North and South Seas, &c. and cause Draughts and Designs to be made of them; and also you are to take notice of all Trade Winds, &c. you meet with, and of the Weather, and especially to observe Harbours in the Streights of *Magellan*; You are in all places where you Land, to observe the nature of the Soil, and what Fruits, Woods, Grain, Fowls, and Beasts it produces, and what Stones and Minerals, and what Fish the Rivers and the Sea doth abound with; You are to do your utmost to procure of the Minerals to carry to *England*, and to deliver them to His Royal Highness's Secretary. You are also to mark the Temper and Inclinations of the *Indian* Inhabitants, and where you can gain any Correspondence with them, you are to make them sensible of the great

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Power and Wealth of the Prince and Nation to whom you belong, and that you are sent on purpose to set on foot a Trade, and to make Friendship with them ; but above all, for the Honour of our Prince and Nation, you are to take care, that your Men do not by any rude Behaviour or Injuries to them, create an Aversion in them to the *English* Nation ; but that on the other side they endeavour to gain their Love by kind and civil Usage toward them, and whosoever shall act otherwise, you are to correct him or them for so doing, which you are to acquaint your Men with, that they be not ignorant. You are to be careful of your Provisions and Liquor, and to husband it to the best advantage, that there be no wastful Expence made of it, nor of your Ships Furniture, as Sails, Anchors, Cables, and Rigging, &c. and that you endeavour at all places where you come, to get Provisions, Wood and fresh Water, so as you do not endanger your Ship and Men, which you are to be very careful of, and in no cause to expose any one of your Men to the hazard of his Life, but always be careful that they be well guarded, and be watchful, for there have been many cut off by their own neglect. You are to be careful to keep a good Command aboard over your Men, and in case any mutinous practice happen under your Command, you are forthwith to make it known to me. You are to be careful to have your Ship kept sweet and clean for the preservation of your Men's healths : And God prosper us.

Given

12 Sir John Narbrough's Voyage

Given under my Hand on board his Majesty's Ship the *Sweepstakes*, riding at the Island of Saint Jago, in Port Praya Road, November 5. 1669.

John Narbrough.

To Captain Humphry Fleming, Commander of the Batchelour-Pink, These.

Instructions for the better finding each other after Separation by Chance, foul Weather, or otherwise.

YOU are hereby required to Sail with his Majesties hired Ship the *Batchelour*, under your command, and to keep company with his Majesties Ship the *Sweepstakes*, along the Coast of *America*, to the Southward of *Rio de la Plata*, to Port *St. Julian* on that Coast, which lies in about 49 d. 20 m. South Latitude, which your Draughts mention. In case of separation at Sea in this Voyage from each other, you are to use all means to endeavour to meet again, that is to say, by looking well abroad at Sea, and so to observe the Order in your sailing Instructions, to know each other at sight: the next Post of Rendezvous will be at Port *St. Julian*, which is on the coast of *America*, as is said before; You are to make all the hast that you can thither, and to stay for the *Sweepstakes* there two whole Months, if you get thither before her, and she shall do the like for you;

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you. In your way thither, after you have passed to the Southward of *Rio de la Plata*, 'twill be best for you to sail along the Coast of *America*, to see if you can fall with me, and to make Cape *Blanco* which lies in about 17 d. 20 m. South Latitude, and so to *Port St. Julian*, where you are to stay; you may also enquire for me at *Port Desir*, which lies in about 48 d. South Lat. If I shall come to any place, and be gone again before you come thither, I will leave a piece of Board nailed to a Pole or Tree, engraven, mentioning the Ship's name, and the day of my Departure, and the next Port I intend to go to; I desire you would do the same; and at *Port St. Julian* I will do likewise, and also leave an Order for you tied to a Pole, being put in a Glass Bottle; the Pole shall be placed on the Island which lies in the Harbour at the West End thereof, where I shall build a Tent: pray be careful to look for it, and I shall do the same for you; it may be I may have an opportunity to touch on the Coasts as I sail along, if I can find any Trade with the Natives; you may be sure, where ever I come, to find those Memorials of my being there before you: so God prosper our Intentions.

Given under my Hand at *Port Praya Road*, on Board the *Sweepstakes* riding there at the Island of *St. Jago*, *Novemb. 5. 1669.*

John Narbrough.

To *Captain Humphrey Fleming*, Commander of
the *Batchelour Pink*.

Decem-

December 4. Many flying Fish seen to day, and Bonetto's, Sharkfish, and Albycores, a Fish larger than a Bonetto, but of that Mackrel shape, and feaverish Diet. they live upon the flying Fish like the Bonetto's; to day we caught some of them with Hooks, and one Shark; our Men eat them both, and account the Shark a good Fish.

December 7. To day the Cooper found two Buts of Beer had leaked out: this day all of us drank Water only, for it was ever my order that the meanest Boy in the Ship should have the same allowance with my self; so that in general we all drank of the same Cask, and eat one sort of Provision, as long as they lasted: I never permitted any Officer to have a better piece of Meat than what fell to his Lot; but one blinded with a Cloth serv'd every Man as they were call'd to touch and take, by which means we had never any Difference upon that score.

Saturday, December 18. All the Ship's Company, God be praised, in good Health. most of them were let Blood after I had cross'd the Tropick of *Cancer*, and none troubled with the Calenture in this Voyage.

Whilst I am in the hot Weather I allow a quart of Vinegar to 6 Men *per* Week, and also to eat with their fresh Fish, which I divide equally among the whole Ship's Company, be it little or much, or caught by whomsoever.

Friday, December 24. I find great Difference within this 48 hours between my dead Account,

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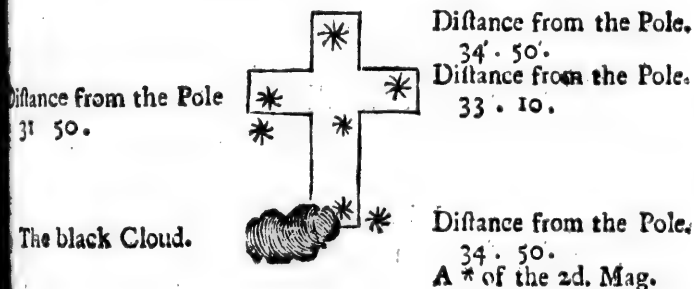
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as we call it, which is kept by the Log, and the Observations I made these 2 days when the Sun was on the Meridian; for I find I have gone more Southerly by 12 Miles than the Log allows; I can't perceive any variation, and the Log is well kept, and the half minute Glass good; I judge the Current sets to the Southward, now the Winds are at the East, and the Moon near the full.

December 30. This Afternoon I took an Azimuth, and find six degrees ten minutes variation Easterly, my Observation being of a good one; fair Weather to Night at 9 a Clock, *Nebeles major* was very visible in the Heaven, and seems to be a piece of the Milky-way broke from it; the Southern Constellations appear which are near the Pole *Antarctick*, the *Camelion*, the *Bird of Paradise*, the Tail of little *Hydra*, and the *Water-Snake*, which are all small Stars of the 5th and 6th Magnitude; no Pole star, nor any Star fit for Observation to be seen within 15 degrees of the Pole, the *Cross Stars* of the first and second Magnitude are good for Observation, and are in this form when they are on the Meridian above the Pole.



Some

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Some Fowls flying to and fro, a kind of Sea-gulls, and Gannet a black Sea-Fowl as big as a Pigeon, and some large ones of that kind, three Tropick Birds flying over the ship of a grey Colour, with a long spired Tail as big as Pigeons.

Some Bonetto's taken to day; A great broad flat Fish like a Scate, following the Ship, called by the Seamen a *String-Ray*, having a long Tail and a sharp bow at the end of it, when it pricks a Man it puts him to much pain; they are called by some *Cloke fishes*, the lesser sort are good to eat.

January 5. Variation of the Compass by an Amplitude in the Morning 06 d. 46 m. East; this Afternoon I brought the Ship to, and sounded one hundred and eighty four fathom right down, and had no ground; I being thwart of the Shoals of *Brazil* caused me to sound, I thought the Sea look'd whiter than usual, variation at Sun-set, 6 d. 46 m. East; little Wind this Afternoon, at East by North; I made all the Sail I could, Stay-sails, Steering-sails, Boats-sail and Bonadventure-misen, all set to draw away Southerly, some Fowls flying over the Ship, which we call *Mén of War*; they prey on flying Fish, &c.

January 14. Few Fish seen; now and then a small Bonetto taken, small Sea-Fowls call'd *Black Nodies*, flying to and fro, and 2 Curlicus flying to the Eastward.

January 24. I judge a Current sets out of the *River of Plate*; for I find nine miles more to the Southward than I expected; I have been careful of my Course and Variation, which is but 18 d.

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10 m. East, by an amplitude taken to Night; I am open of the mouth of the River of Plate; founded to Night, but no ground at one hundred and forty five Fathom; Wind at North and by East, all Night close Weather. I steered South-west and by South.

Monday, January 31. Calm this Morning; at 8 a Clock the Wind came to the North-west a fine gale; at eleven a Clock the Wind went round the Comps, and came to North; with much thunder, lightning and some rain; very dark Clouds, cold hasey Weather; several spots of Sea-weeds driving in the Sea, and a great many Sea-fowls of a brown colour swimming in it: smooth Water, Course steered is South-west by my Compass. This day one main shroud and one fore shroud broke, and to strope of the Main-jeer block; Variation of Sun-rising by an Amplitude is 19 d. 43 m. East; all my Men in good health, God be praised.

All the Albycores, Bonetto's, and flying Fish have quite left the Ship; no Fish to be seen but Whales.

Tuesday, February 1. Cloudy foggy Weather this Morning, and little Wind at South-east. I stood to the South-westward; I saw abundance of Sea-fowl flying to and fro, striking about the Weeds for small Fish, several beds of Sea-weeds driving by the Ship; it fell calm this Afternoon; many small Shrimps about the Ship, and eight young Seal-fishes close to it; they were as big as an ordinary Spaniel-dog, of a black colour, and went away to the Westward. This Afternoon a fresh gale at South-south-east; I steer'd

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away Southward and by West by my Compass; the Air as cold here on a sudden, as 'tis in *England* in *September*. These Seas are very much exposed to sudden Gulls and variable Winds; for the Wind has run round the Compass twice or thrice a day these 3 days; the Sea water is changed whiter than the usual colour, whence I conjecture I must be in Soundings: also by my account of Longitude, kept from the *Lizard*, I am now 1 d. 28 m. off from Land, according to *Mercator's* Draught. This Evening I sounded, but had no ground at 130 Fathom; Wind at South a fine gale: I steer'd in West-south-west; at ten a Clock to Night; I observed the Water to ripple as if it were over a shoal, and had ground at seventy Fathom; I caused the Head-sails to be braced to the Mast, and sounded; fine red Sand inclining to grey at 70 Fathom.

February 2. Meridian distance from the *Lizard*, West 839 Leagues, 2 Miles $\frac{8}{10}$; Longitude at Noon from the *Lizard* West 49 deg. 43 m. little Wind this Afternoon, and fair Weather; we lay sometimes one way, sometimes another; Wind at South-west and by South, a small gale. I hoisted out my Boat, and sounded, but no ground at 130 Fathoms: I tried the Current with my Boat, but found little or none worth notice: the Sea rippled in many places; I sounded on them, but no ground at 108 Fathom; several Beds of Sea-weed driving to and fro in knots; these Weeds are five or six Fathom long, in strings, with broad Leaves on them of a brown colour; at the root hangs a Clod or Rock of 2 or 3 pound weight; several Sea

Fowls flying quite clear of their Birding, not moving very like to and Whales

February

weed, and black, other fishes like to Bull dogs, at time, and at diving at Afternoon a of 41 degree from the *Lizard* and in Mer Leagues; M 616 Leagues 36 d. 34 m.

This Night it would be in what Latitude this Coast of ward of the B instructions, and a Trade told me I might understand the was his who he had been the Coasts from the and thorow the

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Fowls flying and swimming near the Ship; it being quite calm, my Men kill'd some of them with their Birding-pieces, for they were very tame, not moving at the report of a Gun; they are very like to Sea-Gulls, and good meat: some Seals and Whales seen.

February 5. Were seen several beds of Rock-weed, and Sea Fowls, much like Gannets; some black, others white, pied, and grey; small Seal-fishes like so many Dogs, for their Heads resemble Bull dogs, which they'll keep above Water a long time, and look at the Ship; they are very nimble at diving and skipping out of the Water. This Afternoon at seven a Clock I was in the Latitude of 41 degrees South, and in Longitude, West from the *Lizard of England*, 52 deg. and 50 min. and in Meridian distance from the *Lizard* 89½ Leagues; Meridian distance from *Port Praya*, 616 Leagues, Longitude from *Port Praya*, West, 36 d. 34 m.

This Night I advis'd with *Don Carolus* where it would be best for us to hale in with the Land, in what Latitude, or at what Cape or Harbour on this Coast of *America*, being now to the Southward of the River of *Plate*, and according to my instructions, before the Coast to be discover'd, and a Trade set on foot with the Natives; He told me I might do what I would, for he did not understand the Coast, nor where 'twas inhabited; 'twas his whole Discourse in the Voyage, that he had been here in a Galley, and knew all the Clo Coast from the River of *Plate* to the *Streights*, and thorow the *Streights* all along the West Coast

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to *Baldavia* and *Lima*; being arrived here, as far as I can perceive by him, he knows nothing of the matter, nor any thing appertaining to Navigation; all I can fancy of him is, that he may have liv'd with a *West-Indian* Governour, whom he has heard talk of these Parts.

February 8. At 7 a Clock this Afternoon the Wind came to the West-south-west, a stiff gale. I stood to the Southward; much Rock-weed pass'd by the Ship to day, and several Sea-Fowls seen; very cold for the Season, being Summer, which *Don Carolus* began to complain of, and told me, He did not think we should have come so far Southerly; I shew'd him by my Plates how far we were to go through the *Streights*, and along the West Coast; he said, The *Spaniards* went to *Chile* a nearer way; I answered, 'Twas into the River of *Plate*, and over Land, which we could not do.

My Company are all in good Health, but some of a puny Race grow weak in being so long on shipboard; I give them Vinegar once a Week, which is very good to prevent the Scurvy in their Mouths; also I order'd every Man to wash his Mouth, Face and Hands before he receive his daily Allowance of Bread, and appointed one Man to see it performed; If any neglected it, the Steward kept their Allowance for one day; likewise every Man is commanded to keep himself clean, and free from Lice, upon forfeiture of his daily Allowance to the Party accusing him; by these means the Ship is kept neat, sweet and clean, though the dirty foggy Weather is a great Enemy to this Discipline.

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February 19. I founded often to day, and had fifty and fifty three Fathom; dark black Sand, with some bright fine Sand in it; Beds of Rockweed, Seals, and Porpoises, such as are in the *European Seas*, seen to day; three Whales, many Fowls flying about, and some Penguins in the Sea, swimming near the Ships; at 2 a Clock in the Afternoon the Wind was at *E. b. S.* a stout gale and a great Sea; I stood to the Southward, close haled under my Courses; the Pink half a Mile to Windward of me under her's; she out sails us now it blows, and puts us past our Topsails, and steers along with us with only her Main sail set; the Sea runs lofty.

Monday, February 21. At a quarter of an hour past eight this Morning, I saw the Land bearing West of me, and distant about 4 Leagues: I founded, and had 21 Fathom; small Stones and Sand; still I stood in West by my Compass. The Land makes but an ordinary heighth towards the Sea side, but farther up, round high Hills, and looks reddish; the Northermost Land I could see, which was *Cape Blanco*, bore North north west of me about two Leagues, and the Southermost Land at the Face of the Cape.

The Land trented away to the Southward of me, Southwesterly, of an ordinary height by the Water side, but up in the Land are Hills like Tables on the top, a little higher than the rest; the Land makes Hills and Valleys all along, like Downs of an ordinary heighth; at nine a Clock this Morning I traced the Head-sails to the Mast, and lay to half an hour till the Fog cleared up, that I might make

the Land plainly, being within five Miles of the shore side, which made a kind of Bay, breached on the shore: I founded, and at 17 Fathom had rough ground, with some small stones drawn up in the Tallow of the Lead, which was dinted by Rocks: Between nine and ten a Clock there was a fine clear by which I saw the Land very plainly; it look'd reddish like seared Grass; no Woods to be seen on any of the Hills or Valleys, but all as bare as the Grass-Downs in *England*: I durst not send my Boat ashore for fear of losing her in the Fog, or being sunk at the shore, whereon the Sea breaks very much: the Wind was at North and by East, a fresh gale blew almost along the shore, and being out but 24 hours before, made the Sea run high: the Land lies by the Sea side South south-west, and North north-east, as far as I could see to the Southward; no fire or smoak to be seen upon the Land.

Course made true after several Courses, from yesterday Noon, till to day at nine a Clock, when I was 3 Leagues off the Land; true Course is West 6 d. 50 m Northerly distance; sailed fifty miles seven tenths. Departure West, 50 miles difference of Longitude West 1 d. 15 m. difference of Latitude North 0 d. 6 m. Latitude by account is 47 d. 14 m. South; no Observation these three days, being foggy Weather.

Meridian distance from the *Lizard* West 10 Leagues 1 mile, 7 tenths, Longitude at 9 a Clock from the *Lizard* West, 61 d. 56 m. 6 tenths Longitude from *Port Praya* Weg, 44 deg. 38 m. 6 tenths. Meridian distance from *Port Praya* West

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I concluded we had shot past *Port Desier* Harbour in the Fog; for the Islands and Rocks which we saw, were *Penguin*, and other Isles lying about it, which lies to the Southward of the Harbour of *Port Desier*. Many Seals, Penguins, pied Porpoises, and several Sea Fowls, &c. seen to day.

Thursday, Febr. 24. Hazy Weather; Wind at West north-west, a fresh gale. I sent Men up to the Top mast-head to look abroad; this Morning no sight of the Pink, I judge she must be in *Port Desier*: I weighed about 8 a Clock this Morning, and stood to the Northward with my Ship; I went in my Pinnace along the shore to the Northward, whilst the Ship sail'd in the Offing, about two Leagues from the shore: The shore-side is in Beaches and scatter'd Rocks; in many places the Tide of Flood was with us: At the North end of *Seals Bay*, lies a small rocky Island copling up like a Haycock. It is cover'd with grey colour'd Fowls Dung; a very strong Tide runs here, between the Island and the Main, 'tis a little more than a Cables length from the Point of the Main; there's a great many broken Rocks about it by the Sea-side: here the main Land is low and sandy, up the Country in large Downs and Hills, without Wood or fresh Water any where. On this Island are abundance of Seals, and Sea Fowls; we gave it the name of *Tomahauke* Island, from an *Indian* Club lost here, called by the *Caribbe-Indians* at *Surinam* a *Tomahauke*; 'tis all a craggy Rock, a little bigger than *Seal-Island*, and

is eight Leagues to the North north-east: distant from it to the North-west of this Island, is a deep rounding Bay, call'd in the Charts *Spiring's Bay*, wherein lie three small Islands of an indifferent height: the Land in the Country over this Bay, is large high Hills; Rocks lie in the North part of the Bay; I cross'd it in the Pinnance, and sound-ed as I went over, and had 21 Fathom, rough ground in the mid-way: 'tis seven Miles broad, and near 3 Leagues deep; it rounds with a turning up to the North-north westward, behind a Point farther than I saw; upon which rounding Point stand black Rocks, which make like a ragged Building, and a Tower in it. At my coming in with the Land, I sail'd close under this shore with my Boat; the shore is steep, black Rocks, and low Bays, with Pebble-stones and sandy Beaches; green Grass on the Hills, no Wood nor fresh Water to be seen; at the North east Point of this *Spiring's Bay*, the Land makes out full like a fore-land; a fair high Land in large plain Hills, with sandy small Bays: at the face of this Foreland lie six rocky Islands; one is a Musket-shot off the Main, the rest farther off; the outwardmost is the biggest, a Mile from the Point of the Main, and is called *Penguin Island*; it is indifferent high at the ends, and low in the middle; 'tis near three quarters of a Mile long, North north east and South-south west, and near half a Mile broad East and West; it is all craggy Rocks, except in the lowest part of the middle, which is gravelly, and in the Summer time has a little green Grass; the great black Gannets lay their Eggs here, and the Pen-

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guins, all over the Island upon and under the Rocks in Holes. Seals lie all about the sides, on the tops of the highest Rocks, and in the middle of it; the number of Seals, Penguins and Sea-Fowl upon these Islands, is almost incredible to them that never saw them; for the multitude of each Creature that's there daily, is numberless: the six Islands are full of Seals, but the Penguins frequent the biggest most. I put ashore at one of them, and took into my Boat three hundred Penguins, in less than half an hour, and could have taken three thousand in the time, if my Boat would have carried 'em; for 'tis but driving 'em in Flocks to the shore, by the Boat side, where two or three Men knock them on the head with short Truncheons, and the rest heave them into the Boat; the Seals will run over a man, if he does not avoid 'em: mean time the Ship was standing to the Northward: About 2 Leagues off many broken Rocks and foul Ground lie among these Islands, and without the Point of the outermost it makes a great Ripling, which is the strength of the Tide, reversed from the Islands against the other Tide: to the Northward of these Islands is a Bay, four Leagues long, and a League and half deep; in the Northwest thereof lies the Harbour of Port Desier, which we could see from *Penguin Islands*, bearing North-north west from *Penguin Island*, distant about 3 Leagues: About the middle of this Bay are steep white Cliffs, near two miles long; the upper part of the Cliff has black streaks down a fourth part, caused by the Water draining down on it: the Land is plain on the top of these

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these Cliffs, but further into the Country high rounding Hills and Downs, and toward the Water side low. On the South part of the Bay are craggy Rocks on the Main like great Walls; near the sea there's a sandy Cove, to hale a Boat up in foul weather: the Cove is just under these Wall like Rocks.

Saturday, Feb. 26. Fair weather, the Wind at West, a stiff gale. I kept a Light out all night, that the Pink might see if she came along; the first part of the night a great Fire was made on the shore for the same purpose: Cold weather: This morning at 7 a Clock I manned both my Boats, and went into the Harbour; the Ship rode moored at the Harbour mouth, within the Musclee bank, in six Fathom at low water; I sent my Men upon the Hills on the North shore to look abroad for the Pink, and made a Fire in the dry Grass, that she might see the smoak if she were thereabouts, but they could not see her. I founded the Harbour in many places to day at low water, and found it a very good one for great Ships to ride in, provided they have good Cables and Anchors. I searched the shore, but found no Wood, and very little fresh water. On the Hilly and large Downs, very few Bushes, but dry, long Grass growing in Tufts and Knots. The Soil is gravelly and dry, in some Valleys well mixt with black Mould: no People, fire or smoke but our own, to be seen. I saw several places where they had lain, behind Bushes upon Grass, which they had plucked up, and that they had made small fires, and roasted Limpets and Muscles: There

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lay Wooll, Feathers, bones of Beasts, and shivers of Flints. I went to a Flag which I left on a Hill yesterday with Beads at it, but finding no body had been at it, let it stand. No Beasts seen any where. except two Hares running over the Hills : This day we were taken up with viewing the Harbour, so that we did not advance above a mile and a half into the land. In the Valleys between the Rocks grow abundance of wild Pease, which had green leaves and bluish blossoms, both tasting like green Pease leaves in *England* growing on vines and tangled together ; also very sweet smelling herbs much like Tares, very green, and white and yellow flowers ; likewise green herbs much like Sage, but grow in knots near the ground like Lettice ; These Herbs with the Pease leaves, make a good Sallad to refresh such as were inclining to the Scurvy ; for want of which fresh Trade several of my Men were falling into it. Here are abundance of very good Muscles and Limpets on the Rocks, and an Island frequented by many Seals, and Fowls : In the River were pied Divers as big as Ducks, some of 'em grey and black shags ; Ducks and other sea-Fowls breed on them amongst the Rocks and Bushes. To day I went upon one of these Islands, and caught as many young black Shags in their nests as loaded the Pinnace ; when I have discover'd better the particulars of the Fowls and other things seen here, I will mention them hereafter : Night coming on, and it beginning to blow hard, I went on board with Herbs, Fowls, and what else I had got to day ; and divided all things equally among the Company, the Boys

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Boys Dividend being as large as my own, or any Man's; it blew very hard this Evening, and looked very black in the South west, an ordinary gale; I kept a Light out all Night in the Poop for the Pink: this day all the Company eat of young Seals, and Penguins, and commended them for good Food: I judged this a very fit Harbour to fit the Ship in, for the main Mast must be unrig'd, and a new gang of shrouds fitted, and Ballast be had; and it might be a means to fall in with the Pink; for from the tops of the Hills we could see a great way into the Sea; so that if she should come near the Coast, we could not miss her.

We found 2 Springs of fresh Water, one in a Valley close by the Water side, in a gully above the Ship, half a mile up the River; the other up a Valley between the Rocks, just a-brest where the Ship rode, about half a mile from the River's side, right from *Coopers-Bay* in the same Valley; these Springs are but small, and the Waters a little brackish or saltish; for in the dry Valleys the Earth is naturally saltish; the Ground and Rocks have a white rhime of Salt-petre hanging on them: I went into the Land 2 miles North-west, and saw the Country hilly, and dry Land without Wood or Water; some craggy Rocks and Valleys, low, but dry and of a Salt-petre nature; here and there some Bushes with prickly Branches, and Leaves like White-Thorn Bushes in *England*; the lesser Bushes have small dry Gauls growing on them, with a small dry Seed as hot in the Mouth as Pepper; not a Tree to be seen: the Soil is gravelly

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velly and sandy generally, with tufts of dry leaved Grass growing on it: I digged in several places but saw nothing but gravelly Sand and Rocks; no sorts of Metals or Minerals; I looked also among the broken Rocks for Metals, but saw no sign of any: From the tops of the Hills I could see a great way into the Land, which is all Hills and Downs like *Cornwall*: toilsom travelling to those that were not used to it; I could travel as far in an hour as many of my Men could in two; to day we saw nine Beasts feeding on the Grass, very like Deer, but larger, and had longer Necks, but no Horns; reddish colour'd on the Back and aloft, whitish under their Bellies and up their Flanks; when we had got within a Furlong of them they fell a neighing like Horses, one answered another, and then all run away.

Tuesday, March 1. Fair Weather this Morning, Wind at North, a fine gale and a cold Air. This Forenoon I filled the Casks out of the Spring, and dug them deeper: I set up a long Pole with a white Cloth upon it, on a Hill near a mile into the Land, where 'twas most likely to be seen by the Inhabitants; with it I left Beads, a Looking-glass, a Knife, a Hook and an Hatchet, to invite the People of the Country to shew themselves, for I was willing to see 'em, that I might discover what they had; but though I went about the Hills this Afternoon, I could see neither People, Fire, nor Smoak. I saw three Ostriches, but could not get near enough to make a shot at them; they were feeding on Grass, and at first sight of me ran away; I had a Greyhound with me, which I turn'd

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loose upon 'em, who gave chase to one of them, and at last gave her a turn, which she recovered, took to the Hills, and so escaped: they are grey coloured, and larger than a great Turkey-cock in *England*; they can't fly, but have long legs, and trust to their running. I saw two handfuls of Wooll among the Grass, where the Natives had made a Fire; it was *Spanish* red Wooll, which they bring out of *India*, and very fine; I brought it away with me, and set the Greyhound at 3 of the large Beasts like Deer, but they were too swift for him; Night coming on, I returned on board; at 7 a Clock this night the wind came to the North, a fresh gale, and hasey weather; no sight of the Pink to day: I could see a long way on the Sea; at 10 a Clock it rain'd, and the wind came to the *South East*.

Friday, March 4. Fair weather this Morning, the wind at East, a fine gale, I went ashore and filled fresh water, the rest of the seamen fitted Rigging. This day at 12 a Clock I went with both the Boats, and forty Men to *Seal Island* into the harbour, every Man with his Staff and Club: We landed, drove the Seals up together, beset them round, and in half an hours time killed 400 young and old; striking them on the head kills them presently. As soon as they were knocked down we cut their throats, that they might bleed well whilst they were hot; then loading both the Boats with them, I carry'd them to the Bay where the Tent was, landed, and laid them upon the Rocks; to night the Boat fetch't them all off: the great Male Seals are as big as Calis, and re-
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temble a Lion in their shaggy Necks, Heads and Faces, as well as in their Roar ; the Females are like Lionesses before, only they are hairy all over like a Horse, and smooth, and the Male is smooth all over his hind parts ; their shape is very deformed, for their hind part tapers till it comes to a point, where grow two Fins or Feet, two more grow out of their Breast ; so that they can go on Land a great pace, and climb Rocks and Hills of a good height : they delight much to lie and sleep ashore ; some are very large, upwards of eighteen Foot in length, and thicker about than a But in the Bilge, and excessive fat : there are thousands fourteen foot long, the common sort are about five foot, and all very fat ; they'l gape at you when you come to them, as if they wou'd devour you, and 'tis labour enough for two men to kill one of the great ones with a Hand-spike, which is the best Weapon for that purpose.

Saturday, March 5. Fair Weather, Wind at South-west, a fine gale. This morning we went ashore to slay some Seals, and cut the Bodies in good hand some pieces, and salted it up well in Bulk on Deal boards ashore, that the Blood might drain from it : the Meat looks as well and as white as Lamb, and is very good Victuals now, but when it is a little salt, it will eat much better : those we treis'd were all young Seals, for they suck'd their Dams, who as soon as they come ashore bleat, immediately come her young ones, and bleat about her like Lambs, and suck her ; one old Female suckles four or five, and beats away other young ones that come near, whence I believe they have
four

four or five at a time; the young ones which we killed and eat, were as big as a midling Dog; we cut the fat off the Great ones, and made Oil of it for the Lamps, and other uses in the Ship; the Oil of the young ones we fried, and eat with our Provisions; it is very sweet and good to fry any Food with; our Men will have it to be as good as Olive Oil; most of my Men to day gather'd of those green Pease leaves and other Herbs for Sal-lads, which some eat raw, some boil'd; it is refreshing to their Bodies.

Sunday, March 6. Blowing Weather, Wind at West: This day, after Prayers, I went a shore on the South side of the River, and travell'd eight miles into the Land, South-west and by West, having twelve armed Men with me; my Lieutenant went up the River, in the Boat, nine or ten miles, to see for People that way; my other Lieutenant went on the North-side with ten armed Men, to see for People, and view the Land: I found in my Travels one of those great Beasts, like a Deer, dead and whole, the Vermin had not touched him; all his Back had pretty long Wool, of the colour of dried Rose leaves, and down his sides, his Belly white Wooll; he was as big as a small Colt, he had a long Neck, a Head like a Sheep, so was his Mouth and Ears; his Legs very long, and Cloven footed like a Deer, a short bushy Tail of a reddish colour; no Horns nor ever had any, it was a Male: I believe these Beasts are *Peruvian* Sheep; (*Guianacoes*) I had his Paunch opened, and searched for the Bezoar stone in it, and in the Pipe to the Stomach, I turned them in-

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side outward, but found none. I had heard *West Indian Spaniards* say, that they have taken the *Bezoar-Stone* of Guianacoes, and therefore opened this, which I take to be the same Beast. In travelling to day I saw several Herds of them sometimes ten thirty or forty together: I could not get near enough to shoot at them: They neigh like young Horses, and so wander away. I saw nine Ostriches, but they would not suffer me to come within shot of them; I let the Greyhound at them, but they out-run him up the Hills. We saw a Fox, a wild Dog, and five or six Hares, of which the Greyhound killed one; they are shap'd like *English* Hares, and much larger, and in lead of a Tail, have a little stub about an inch long, without Hair on it; they have holes in the ground like Coneyes: no Woods to be seen only a few Bushes like White-Thorns. The Land is dry, of a sandy gravelly Soil, in large rounding Hills, not very high, but in Downs and Valleys, bearing nothing but Grass; here and there are gullies of fresh water in the Valleys, which is made in the Winter-time when the Snow dissolves. I saw several places of salt water in the Land, which is occasioned by the natural saltness of the Earth: Here are no Fruits nor Herbs. When I was at the farthest, and on a Hill, I could not see any sign of People, or Woods, but still Hills and Vallies as far as we could descry; no Birds to be seen but Kites, which are like those in *Europe*, and small Birds like Sparrows, and Linnets; some Flies and Humble-bees here: we saw some small four footed Animals running in the Grass; speckled-Grey,

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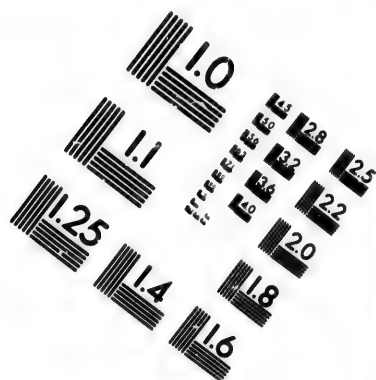
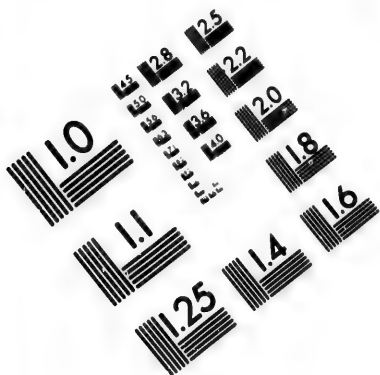
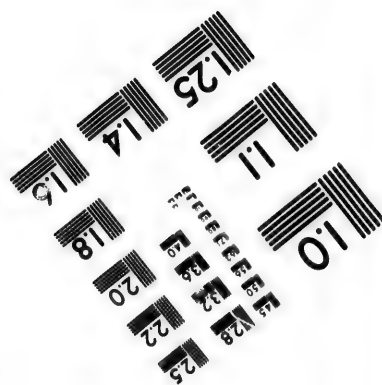
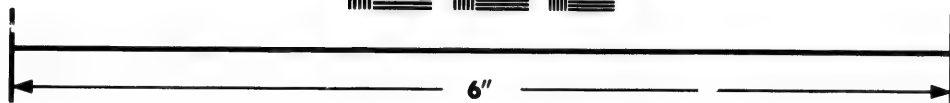
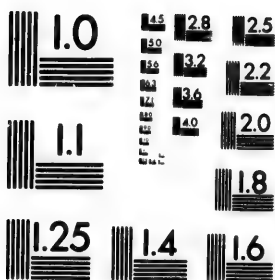


IMAGE EVALUATION TEST TARGET (MT-3)



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shaped like a small Creature in *England* called an *Eft*, *Newt*, or *Lizard*; no *Adder* nor *Snake*, nor any venomous Creature: Cattle would live here very well, such as *Horses*, *Cows*, *Sheep*, *Goats*, &c. Evening growing upon us, I returned to the ship; and 'twas within Night when we got aboard our Boat, and ten a Clock when we enter'd the Ship; I found on Board my Lieutenant that went up the River, but they which went on the North-side were not come back: up the River they saw five small Islands, which had *Sea Fowls* on them and Bushes for fewel: the River grows broader upwards, and has several Rocks in it: on the shore they saw *Guianacoes*, *Ostriches* and *Hares*; no People, Fire or Smoak: they saw where people had been, and Fires made, and Muscles and Lumpets roasted: No fresh water, nor Wood, nor any Metal or Mineral; the Land hilly with Grass on it. At 12 a Clock at Night those that went on the North side came aboard; they had been about 8 miles into the Land North-west, and saw no people, but found where people had been, and made Fires in the Grass, and Grass laid to fire the Bushes; also where some had lain on open places, and set little Bushes in Half Moons, to shelter them from the Weather: on the top of a Hill they made a fire with Grass, to see if any would answer them; they sat down by it all day, but could see none made any where else. The Land is in rounding large Hills, not very high, but like Downs, as the Coast of *Torkshire* about *Burlington*: no Woods nor Trees seen, nor Fresh Water here and there a Bush growing in a Valley; indistinct

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Sunday, March 13. Indifferent Weather, Wind West, a fresh Gale: The Air cold this morning. I went up the River in my Boat with fourteen men armed: I past the Island, where the brushy

Bushes are, and where we took the young Shags : there the River grows broader, near a mile from the North shore over to the South, and continues that Breadth four miles : then it becomes narrower, and turns away to the South-west : at this turning is an Island of a mean height, and Rocky, bearing some small Bushes and Grass : I went upon it, and saw a Post of five foot long set up (it had been the timber of a Ship) with a piece of Board about a foot square nailed to it, at the foot of it one of my Men took up a piece of Sheet-Lead, and gave it to me, it had this Inscription graven on it,

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In a hole of the Post lay a Latten or Tin Box, (which we found by a long Plug that stuck in the Hole) with a sheet of written paper enclosed in it, but so eaten by the Rust of the Box, that 'twas not to be read. I cut out with my knife upon a Board the Ship's name, and the Date of the Year and Month, which I nailed to the Post; and brought away the Lead with me, and named the place *Le Mair's Island*: We found on it several pieces of Boards, of the Wrecks of some ship that had been burned; they were drove up here by the Tide: The people of the Country can't get upon this Island. From hence I went on the North side of the River two miles into the Land; no Trees to be seen, but many Ostriches and Guianæ coes in many places. The Soil is marly and good, the Hills not very high, but plain large Downs, with Grass on them all over. Digging in two or three places I found sandy dry Ground near a foot deep, then Marle. In my opinion it might be made excellent Corn ground, being ready to till: 'Tis very like the Land on *New Market Heath*; no People to be seen. I searched the Gullies and broken Rocks, for Grains of Gold or Minerals, but found neither. I return'd to the Boat again, rowed farther under the shore, landed, and mounted a steep high Hill to view the Country. On the top of this rocky Hill grow small Bushes. I could see the course of the River a long way further, and the Land all Grass; here and there a white spot of Marle on the side of a Hill; no people to be seen nor Boats on the River: I came down to the Boat: several Creeks run from hence a mile or two into

38 Sir John Narbrough's Voyage

the Land. I cross'd the River to the South-east shore; we made the Boat fast in a Creek in a Valley, and went all hands up the Land 3 miles; we saw many *Guianacoes* and Ostriches, but could not come within shot of them. I saw the Foot-steps of five Men that had been upon the Oar; I measured my Foot with them, which was larger and longer by half an inch than any of them; we could not see any people: it being near Night we pluckt up Grass, and laid it to the best advantage for shelter. Here we lay all Night, keeping Watch two by two. Cold Air to night, wind at West.

Monday. March 14. Fair weather, but cold. This morning by day light we turn'd out, and march'd into the Land Four miles S. W. b. S. We could not find any fresh water. We made Fire on the Grass but saw no sign of any People: we saw *Guianacoes*. Hares, Foxes, wild Dogs pretty large and a grey Cat, like an *English* one, running up the Hills: to day we caught an *Armadillo*; the Dogs put her to ground: they have holes like Coneyes; we soon dug her out, 'twas as big as a great Hedg hog, and not much unlike one. The *Armadillo* is cas'd over the Body with a shell, shutting one under another like shells of Armour: the Dogs cou'd not hurt her. We saw Rats in many places, and a kind of Polecat, with 2 white streaks on the Back, all the rest black: our Dogs killed two of them: they stink much, several Ostriches, some Partridges and many Kites: the Land in fair *Hills* without Wood or fresh water: The soil is a sandy *Gravel*, with Grass all over it: no

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Mineral or Metal seen. This afternoon we returned to our Boat, and went through a Creek two miles long, which is dry at *Low Water*, and not more than thirty foot broad. It makes a fair Island of a mean height, plain on the Top, and Grass growing all over it, but no *Wood* nor *Water* upon it: the greatest part of it is a sandy marly *Soil*: 'tis two miles long, and half a mile broad: the Greyhound killed two Hares on it *presently*, and we saw above twenty. I call'd it *Hare Island*: it is adjacent to the *South Shore*; eight miles up the River from the narrow, I went down the River and went aboard. This Evening cold Air, wind at west, a stout gale: towards morning it came to North. I cannot perceive the *Indians* have any Canoes or other Boats here.

March 24. Blowing weather, wind at west. We fetcht all our things off the shore, and got the Ship ready to sail. I went ashore on the *South* side to the *peeked Rock*, and found it a natural Rock, standing on a small round Hill, as if it had been *built* there by Man. It hath a Cleft on the top of it as big in circumference as a But: 'tis near 40 foot high above the *Hill* it stands on; about the *little lumps* of Rocks. I saw nothing else worth notice, so I returned to the *Ship*; the biggest stick growing in or near this Harbour, or in the Countries as far as we went, which was 20 miles, wou'd not make a *Helve* for a Hatchet, but there are *Bulhes* which will serve for firing at *Sea*: before night I had *all things* on board, and the Ship fitted with intent to sail next morning, and looked along the Coasts for the *Pink*, till I arrived

at *Port St. Julian* Harbour: fresh Water is scarce in *Port Desier* Harbour in the Summer time: the places from whence I fetched Water, are small Springs on the North side, out of which I filled near forty Tuns: the first Spring is on the North side as you enter the Harbour, half a mile up a Valley, in a Gully of Rocks: it bears *N. N.W.* from the lower Rock: That we called *Pecker's Well*. is a mile up the River within a Bow shot of the salt Water, 'tis in a Gully. The Land in these Valleys has very green and sweet Grass, and abundance of wild Pease. small Nut-galls growing on the Bushes, but in no great quantity, and but few Bushes: Salt may be had here; for on the shore side and on the Rocks I gathered several handfuls of good Salt.

March 25. Gentlemen, You are by me desired to take notice, that this Day I take possession of this Harbour and River of Port Desier, and of all the Land in this Country on both Shores, for the use of his Majesty King Charles the Second, of Great Britain, and his Heirs. God save our King, and fired Three Ordnance.

Saturday, March 26. Wind at West, a stout Gale. I stood to the Northward: this morning at six a Clock when the Sun appeared above the East Horizon, the Moon set in the West Horizon, being eclipsed at *London* at Eleven a Clock, ten minutes in the Forenoon, but here at six a Clock thirty minutes past, which gives four hours forty minutes difference of time, between the Meridian of *London* and the Meridian of *Cape Blanco* which Cape lies in the Latitude of 47 d. 20 m. South

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South; on the South-east Coast of *America*, where I saw this Eclipse 70 degrees in Longitude to the Westward of the Meridian of *London*, by this Observation: I could not see the whole Eclipse the Heavens being clouded; I find *Cape Blanco*, by my account of Sailing, to lie in the Longitude of 69 d. 16 m. to the Westward of the Meridian of *London*: If the Moon had not been clouded, I might have been exact in the Longitude, but I presume my Account is not much out.

Cape Blanco lies in the Latitude of 47 d. 20 m. South, and in Longitude from the *Lizard*, West, 61 d. 56 m. and in Meridian distance from the *Lizard*, West, 1014 Leagues, 1 Mile, 17.

Port Desier in *America*, lies in the Latitude of 47 d. 48 m. South, and in Longitude from the *Lizard*, West, 61 d. 57 m. Meridian distance from the *Lizard*, West, 1015 Leagues, 2 Miles, 17.

Penguin Island, or the plentiful Isles, Latitude 47 d. 55 m. South, and in Longitude from the *Lizard*, West, 61 d. 57 m. Meridian distance from the *Lizard*, West, 1014 Leagues, 2 Miles.

Variation of the Compass here is Easterly 17 d. 30 m.

April 1. The *Sweepstakes* off of *Seal's Bay* in the Latitude of 48 d. 10 m. South, on the Coast of *Patagonia*.

Saturday, April 2. Fair Weather this Morning, Wind at North north-west, a fine gale. I filled at Day light, and steered away South south-west, and South and by West by my Compass, as the Coast lies; I sailed along in twenty Fathom water: black Sand distant from the shore near three Leagues;

Leagues : this forenoon at nine a Clock, I saw a small flat Island to the Westward of me, about a League off the Land ; it lies in the Latitude of 48 d. 40 m. South ; the Land against it is high, in large Hills, and some large coping tops ; two Leagues more to the Southward, the Land is low, in a great Plain, and a Beach by the Sea-side, but the shore against this Island is rocky. I was two Leagues East from the flat Island, and had twenty three Fathom black Sand ; I haled close in for the shore, and sail'd within five Miles of it. All along from this Island to *Port St. Julian*, I sounded as I sail'd along, and had 18 or 20 fathom fine black Sand ; the Land is low in a Valley ; the Sea-shore is a Beach, here and there a Rock ; it is in a long Beach for four Leagues. After you are to the Southward of the Flat-Island one League, the shore lies South-south-west, and North-north-east ; at the South end of this Beach in-land are high round Hills, but at the Sea-side is a steep white Cliff, of an indifferent heighth, with a black streak in it ; over the Cliff the Hill rounds up to the top, having some small black Bushes growing on the side ; no Wood or Tree seen.

In this Bay is *Port St. Julian* ; the Harbour's Mouth is in the middle of the Bay, but you cannot see it without, for one Point shutting in the other ; you must send your Boat in to discover the Harbour at Low-water, and the Bar without, for 'tis a barred Harbour : the Land in the Country over *Port St. Julian*, on the West-side, is high coping round Hills, like blunt Sugar-loaves on the top ; 'tis the highest Land I saw in all the Country,

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and there are no such Hills be sides on the Coast; the Land is plain to the South, without any Hill, as far as we could see at this time: this Afternoon it proved a Calm; I anchored in the Bay before *St. Julian*, in twelve fathom Water, black oary Land, the Harbour's mouth bearing West south-west of me, about two Leagues off; I sent in my Boat to discover the Harbour, and see if the *Pink* was there, which returned to Night at six a Clock; my Lieutenant told me there was a safe Harbour, and Water enough for a bigger Ship, but no *Pink*, nor any sign of her having been there; now I despaired of ever seeing her more, after my hopes were frustrated here; nevertheless I doubted not the success of my Voyage, though the Company thought 'twould be dangerous being a lone Ship, in a stormy Sea to sail in, and unknown Coasts to search out, and if we should happen to run around any where, could expect no Relief: these suspicions I soon put out of their Heads, by telling them of the great Riches of the Land, and that *Captain Drake* went round the World in one Ship, when in those days there were but ordinary Navigators; and was it for us to question our good fortune, who beyond Comparison are better Seamen, if we would put our selves in Action; and for me, I would expose no Man to more danger than my self in the Attempt. Calm to Night: I rode fast, a small Tide running where I rode; the water ebb'd near three fathom perpendicular: it was near nine Leagues from the *Flat Island* to *Saint Julian*, South-south-west and North-north-east as the shore lies.

The

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The Mouth of *Port Saint Julian*, in Latitude 49 d. 10 m. South, and in Longitude from the *Lizard* 63 d. 10 m. and in Meridian distance from the *Lizard*, West 1030 Leagues; by an Amplitude here, the Compass has varied 16 d. 10 m. East.

Wednesday, April 13. Fair weather, Wind at West, a small gale. Frosty and cold Air, no sign of the Pink: I went ashore and haled the Seyne on the East-side; at the first of the Flood we caught five hundred Fishes, as big as large Mulletts, and much like them, grey, and full of Scales, some as big as a Man's Leg; we caught them all in four hours time, returned abroad, and divided them among the whole Ship's Company: they eat admirably well. Many good Muscles lie on the Rocks, and Oyster shells on the Shore-side, and growing in Veins on the Rocks, but no Meat in them: Wind at West to Night, a fresh gale.

Monday, April 18. Wind at South-west, a stiff gale, Cold Air and some Snow this Morning; the Winter is come strong and stormy, so that 'twill be impossible to hold the Coast into the Streights for the Wind blows altogether from the West or West-southerly, and in such Gusts as will force a Ship off the Coast. This day I order'd my Purser to serve the Company Brandy-wine for their Allowance, at a Quart per Week a Man: I got Boats lading of the Wood of the Country aboard for firing; to Night it blew hard at South-west, all the Company eat salt Seal, and Penguins for their Allowance: sweet and very good Mear, and keeps well and long in Salt.

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Friday, April 19. A gale, and cold, the North-wind, which correspond, which with very wind for two miles enough to fill a and laid up near there was Wind decay with the at Night I received Salt with us a Stone-salt, with a pleasant smell: the Herring on them: on the whole, but many and lain under Metal, Tree, &c. *Wednesday, April 20.* Wind; a cold Man.

Thursday, April 21. South, a fine Wind, which'd the Ship Winter in this to pass the Streights generally, out so long and cold this Winter. The good refreshment Weekes, and I

Friday, April 22. Windy to sail

Friday, April 22. Wind at South-west, a stiff gale, and cold Air. This Morning I went ashore on the North-west side with twenty Men, to the Salt-pond, which is rusted all over like a Pavement, with very white and good Salt, two Inches thick, for two miles long : in *February* here's Salt enough to fill a thousand Ships ; we filled two Bags and laid up near two Tuns out of the Water, for there was Water over the Salt, which began to decay with the Rain and Weather being on it : at Night I returned aboard, we brought as much Salt with us as filled a Punchion, very good white Stone-salt, whiter than *French-salt*, and of a very pleasant smell ; I saw some Guianacoes, and Ostriches : the Hills and Valleys dry Earth, and Grass on them : on the higher Hills lies Snow, no People, but many places were they had made Fires, and lain under a Bush for shelter ; no Mineral or Metal, Tree, or Fruit.

Wednesday, April 27. Close Weather, and little Wind ; a cold Air, it freezes hard, the Ice bears a Man.

Thursday, April 28. Wind at West and by South, a fine gale, cold frosty Weather. We unrig'd the Ship, and made all snug, intending to Winter in this Harbour ; the Ice will not suffer us to pass the Streights ; the Winds are so stormy, and generally, out of the Western quarter ; the Nights so long and cold, that the passage is impossible this Winter. The Port I found safe to ride in, and good refreshment to be had of Fowls, as Ducks, Peakes, and Divers, &c. In the Spring I may be ready to sail to the Southward, when we shall have

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have the year before us, and the Sun in the Southern Signs, which will give long Days and short Nights, and temperate Weather; Wind at North-north east this Evening. and Rain: it blew a great storm to Night, the Boat sunk at the Ship's stern, and lost the Oars. Less Wind towards Night, and veared to the West.

Friday, May 6. Wind at West north west, a fine gale. I went a-shore on the North west side with thirty Men, and travelled seven or eight miles up the Hill, saw no People: the Land is great Grass-Downs in most places; and on the tops of the Hills, and in the Ground are very large Oyster-shells, they lie in Veins in the Earth and in the firm Rocks: and on the sides of Hills in the Country; they are the biggest Oyster-shells that ever I saw; some six, some seven Inches broad, yet not one Oyster to be found in the Harbour; whence I conclude, they were here when the Earth was formed: no sign of Mine or Metal, no Woods or Tree. We found a good Spring of fresh Water up in the Hills, it drains into salt Water-swashes: We saw several Salt-water Ponds six miles in the Land, made by the saltness of the Earth; we saw Ostriches, Guianacoes, and a Fox. I made a Fire on the top of the highest Hill, but could see no answer; I returned aboard with my Company very weary; some of my Men fetch'd Salt to day. Fair Weather to Night.

Friday, May 13. Indifferent Weather, Wind at West south-west, a fine gale. This day we fetch'd Salt: A Gentleman of my Company, Mr. John Wood, walking on the *Island of Justice*, found three

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Small pieces of Gold-wire in two Muscle-shells: which Shells were made together by a green Gut-string: the Gold was to the value of two shillings *English*, and had been hammered, the Wire as big as a great Pin.

Monday, June 6. Cloudy cold weather, Wind at South-west, a fresh gale. This day I went a-shore with sixteen Men, and travelled ten miles West into the Land; the Hills there are cover'd with Snow: 'tis very cold, we could not go any further for Snow; and the Air is so cold that we could not endure to lie on the ground: on the Hill that I was on, we could see nothing but Hill beyond Hill; no Woods, nor Trees, nor Bushes, nor grass Downs: the Land is flat on the tops of the Hills; fresh Water runs down in several places, which is melted Snow, and when the Water leaves running, there's no Snow. I saw many Guianacoes and Ostriches; no People or sign of any: close by the water-side we saw many places, where they had lain on open Hills in the Snow, and some places where they had kill'd and eat Guianacoe's and Ostriches; they make but small Fires with little sticks; I do not find they roast their flesh at them, for we saw some raw Flesh hanging to the bones, which they had gnawed with their Teeth: their Fires are only to warm their Children's Fingers, as we imagine. I gather'd some handfuls of Guianacoe's Wooll that lay here: I am perswaded these People must needs see us travelling to and fro every day, but won't come near or be seen by us: they live like wild Beasts, or rather worse, for sometimes they must be in great want of Food; here's

here's neither Fruit, Root, or Herb for it: The Land is a dry gravelly Soil, with Sand, and in many places a Marle two foot below the Surface; the Grass, which is dry, grows in knots, not very long but thick; in the Valleys the Earth is of a Petery or nitrous Nature; Ostriches seen; no sign of Metal or Mineral; I and my Company have looked in most places where we travell'd for it: To Night we got down but very weary.

Tuesday, June 7. Close dark Weather, Wind at North east and by East, a fair gale: A new Moon to day, fine Weather to Night, but cold; the Stars near the *Pole Antartick* are very visible; some of the small Stars in the Constellation of little *Hydra* are near the *Pole*; Here are many good Stars near the Pole, good for Observation of the first and second Magnitude: the Star at the South end of *Ariadne*, the Star at *Hydra's Head*, the Star in the *Peacock's Eye*, and the Star in *Tucan's Bill*, and the Stars in *Tucan's Thigh and Back*; the Stars in *Grus's Head, and Wing, and Body*; but the brightest Stars are the Stars in the former foot of *Centaurus* and *Crofters*; the other Stars are of the third, fourth and fifth Magnitude. The two Clouds are seen very plainly, and a small black Cloud, which the foot of the *Crofters* is in, is always very visible when the *Crofters* are above the Horizon, as they are always here in these Latitudes. The Heavens in this South Hemisphere are as the Heavens in the North Hemisphere; but no Stars within eighteen degrees of the Pole fit for Observation; no Pole-star, the Star in the Tail of the little *Bear* is in the North

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North : the Air cold to Night, but very healthy for stirring Men ; I have not had my Finger ached as yet ; a Man hath an excellent stomach here ; I can eat Foxes and Kites as favourily as if it were Mutton ; every Fox and Kite as we kill, we eat, which is ever now and then one killed. Nothing comes amiss to our stomachs ; not one Man complains of cold in his Head, or of Coughs. Young Men well grown, and of good shape, are most fit for this Country, it being a dry and an hungry Air, and Provisions to be got with pains. The Ostriches are nothing so big as the Ostriches in *Barbary*, nor of the Colour nor Feather ; these are grey on the Back, and shaggy Feathers of no use, and the Feathers on their Bellies are white ; they have long Legs and small Wings ; they cannot fly ; they have a long Neck, and a small Head, and beaked near like a Goose ; they are much like a great Turkey-cock, and good lean dry Meat and sweet. To Night I came aboard ; it blew fresh at West.

Wednesday, June 22. Wind at West-north-west, a stout gale. This day I went ashore on the East-side, saw no People. This day Mr. *John Wood* went ashore on the West side, and three Men with him ; they were armed ; they travelled into the Land West and by North about four Miles ; where they saw seven People of the Country on a Hill, making a noise and wafting them to the Ship : Our Men went up the rise of the Hill to them ; three of the *Indian* Men came to Mr. *Wood*, with their Bows and Arrows in their Hands, and a loose Skin about their Bodies, and a Furr-skin

about their Heads, and pieces of Skins about their Feet, and all the other parts of their Bodies naked; they were painted red and white on their Faces; they would not come so near as to let our Men touch them, but stepped back as you moved forward; they continuing their noise, and wasting with their Hands towards the Ship, and kept talking, but no Man could understand them: they repeated *Ozse, Ozse*, very often. They have an harsh Speech, and speak in the Throat; they received any thing that you cast to them on the ground. Mr. *Wood* gave them a Knife, and a Shagh, and a Neckcloth, and a Bottle of Brandy; they would not drink; Mr. *Wood* could not perceive any Bracelets they had, or any thing about them save their Skin. They are People of a middle stature, and well shaped; tawny Olive-colour'd, black Hair, not very long: they seem to be of a rude Behaviour; for they returned nothing for what they received, nor took no notice of any thing; the rest of their Company stayed at the Hill: they can endure much cold; for their Legs, Buttocks, and lower parts are naked. Mr. *Wood* was taller than any of them, and he judged the eldest of the three to be upwards of forty years old, the other thirty. They seemed to be very fearful; they took their own time, and went away into the Land. Mr. *Wood* returned aboard and acquainted me with what he had seen. This Night we saw a Fire in the Hills. It blew hard to Night and West. They have small Dogs with them; they would not have come near our People, if they had not fallen accidentally into the Hills and Valley

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Saturday, July 2. Wind at West, a fine gale. I went ashore on the East-side; we killed a great Guianacoe with the Greyhound. I looked in his Paunch for the Bezoar-stone, but found nothing. I travelled to and fro, but saw no People: I saw where People had made Earthen Pots, and had glazed them, for there lay some of their stuff run together. At Night I went aboard.

Sunday, July 3. Wind at South, close Weather. The Guianacoe weighed, cleaved in his Quarters, two hundred and fifty Pounds neat. He served all the Company for a days Flesh, and is good Meat.

Thursday, July 12. Close Weather, and little Wind at North and by West. I went up to the head of the Harbour, but saw no People: There is in the Fullers-Earth Cliffs at the head of the Harbour, a Vein made like rotten Ising-glass; I took some out, but cannot find it good for any thing: I digged in the Cliff, but saw nothing to be taken notice of. I saw in two places pieces of floor Timbers of a Ship; they have lain a long time rotting. We saw that the biggest of these Bulkes here, have been cut down by some Christian People. I saw wooden Plates, and a piece of Cork, and a piece of an old Oar; some Christian Ship had been here formerly. I lay ashore to Night.

Sunday, July 31. Fair Weather, Wind at South-west, a stiff gale. The Weather as cold as it is

in *England* in the height of Winter, and the Air rather sharper and dryer; I have now twelve Men lame with the cold, and their Legs and Thighs are turned as black as a black Hat, in spots, the cold having chilled the Blood; yet they use bathing and stuping those places, and all that they can to prevent, but it rather encreaseth on them than otherwise: These are such People as I could not make stir by any means; they that stir are as well as any Men in the World can be.

Tuesday, August 2. Close Weather, Wind at South-west, a gale and cold Air. We fall on fitting of our Rigging and getting the Ship fit: Here are hundreds of Guianacoes in companies near the Water-side: my Greyhound is lame; so that I cannot make her run; also here are many Ostriches together with many green Plovers at the Water-side, and some Swans but not full so large as ours. They are white, save a black Head, and half the Neck and Legs black: Here are some white Geese as *European* Geese; the Brant-Geese are some white, some black and grey; The Mallards and Ducks are grey; and the Teals are grey.

Tuesday, August 2. Close Weather, Wind at West and at North-west, a fine gale. I sent the Boat for Water to a Swash on the East-side; two of my Men saw two of the People of the Country on the East-side behind a Bush; my Men went toward them; they went away and left a bundle of Skins under the Bush; my Men made signs to speak with them, but they would not stay; my Men did not go after them but sat down, they would not stay; they were but of a middle

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ture : my Men brought the bundle aboard to shew it to me, and two mungrel Dogs, which were coupled together. I opened the Bundle and it was several bags of Skins, with red Earth and white Earth, and Soot or Paint in a Bag; this is the Trade they paint themselves with; they had Flint stones and Arrow heads in the Bundle. I searched the Bundle all over to see for Grains of Gold, but could not find any; There ware Bracelets of Shells, and bits of sticks, and braided Thongs, and Arrows, and Muscle-shells, and Armadillo shells, and a small point of a Nail in a stick for a Bodkin: Their Skins were pieces of Seal-skins, and pieces of Guianacoe-skins, sewed together with small Guts; all very old and full of holes; and smelt of greafe: There were pieces of Flints made fast with a green Gut, in the split of a stick, which they hold fast to knock their Arrow-heads into shape: There were also pieces of Sticks to get Fire with. This was all that was in the Bundle; it was made fast with Leather thongs braided round like Whip cord, and the Dogs were coupled with such strings: the Muscle-shells are their Knives. I put all things up in the Bag, and made it fast. Their Dogs are much of the Race of *Spanish Dogs*; a good large mungrel Cur, but very tame; any Man might handle them; they were grey in colour, and painted red in spots: they were very lean; there were two great Staves of four foot long, which was tough Cane in short joints: I carried them a-shore next day.

Tuesday, Augnst 30. Foggy close Weather this Morning, Wind at North. We travelled away

West into the Land ten or twenty miles farther: The Land all dry, with Grass, and Bushes in some places like Thorns; the Hills high, and many, and Snow on the tops; no Woods, nor Trees to be seen: Fresh-water comes running out of the Hills in a fine Rivulet; no Fruit; many sedgy Bushes grow on the Brink, and brave green Grass, and a green Herb of a pretty strong hot taste; some Teal in the Water, and Water-birds. This is all I saw about the Rivulet. Many large Ponds in the Country, but salt Water in those Ponds. We saw Fowls like Herons, but all red; in the Valleys we saw hundreds of Guianacoes in a company, and twenty Ostriches: some Hares and some Partridges, greyer and bigger than ours; some Snipes and small Birds; several Penne-wrens: we saw several Kites, and small Hawks, and Owls; we caught two Armadilloes: I saw two Foxes and a wild Dog, and many Brant-Geese: the Land is in Hills and Valleys as far as we could see, and bad travelling on Foot; the Soil is gravelly and dry Sand, of a Salt petre nature; the Grass in some places long and dry, and in some places short and dry; the Hills are rounding aloft like large Downs: We saw red Earth in some places, such as the *Indians* use; we saw the Footsteps of People in many places in the Clay, and places where they had been, and had killed Guianacoes, and made a Fire there; I gathered Guianacoes-Wooll, and Ostriches Feathers were scatter'd about the place, and Bones: there lay the Skulls of three People, no flesh on them; they were very clean, and no larger than the Skulls of *European* Men;

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smooth and even Teeth, close set ; one of those Skulls was broken. Whether these People be *Man-eaters* or not, I cannot tell ; I judge they have Wars one with another , by reason here are so few People in this great Land, and Food enough to live on, and the Land all clear and good Pasturage for Cattle, and no Mountains. In all the Land there are Plains and grassy Meadows: here wants only Wood to build with; if that were here, it would be as good a Land as any part of *America*, for the Country is very healthy. This Afternoon it rained, and was very thick and foggy, so as we could not tell which way to go, although we had a Compass with us ; for there is no going into the Land without one, because a Man will mistake his way, the Country is so open in great Plains and Downs: We were very much wet and cold ; We got to Bushes, and there made a Fire and dried our selves: we stayed here all Night ; we neither heard nor saw any thing to Night.

Tuesday, September 1. 1670. Close hazy Weather; the Wind at North, a small gale, so as I could not Sail this day ; we tried for Fish , but caught none, the Water is so cold. I was on the Land, when I was at the farthest, twenty five miles West-north-west from the Harbour-mouth ; and all things as I saw I have mentioned, excepting some small Creatures like Efts, which ran in the Grass. No manner of Snake or venomous Creature have I seen in this Country ; here are some Earth-worms, and Caterpillars, and other Buggs, but few in number: no wild Beast of prey, or

any other thing to annoy the Inhabitants, but Cold and Hunger: Here lies a large Country open to receive any Inhabitants from forein Parts, and large enough to satisfie the Undertakers: The Land would produce *European* Grain, if planted here, and breed Cattle.

September 16. I considering my Men, being very weak, thought it most fit to go for *Port Desier* and there to refresh the Men, for I knowing there I could have what Penguins and Seals I would have, which are good Provisions; also I do intend to salt up a quantity of each, to carry to Sea with me to lengthen out my Provisions. This Forenoon I steered from *St. Julian* North-north-east, and made what sail I could to get to *Port Desier*: This Night it was a small gale, and veered to the West-south-west; I judged it best to make my easie Sail in the Night, for fear of running up with the Eady-stone-Rocks before daylight.

Wednesday, September 21. Fair Weather to day, the Wind veerable round the Compass. This Morning I had both the Boats laden with Seals, and Penguins and Penguin-eggs; ten Men may kill ten thousand Penguins in less than an hours time; the Seals and Penguins are numberless; a Man cannot pass on the Island for them. This Evening I got on board and landed our lading ashore; fair Weather to Night. The Eggs are very good Nourishment, and the Fat serves for Oil to the Lamps.

Thursday, September 22. Fair weather, Wind at West. This day I divided the Eggs amongst

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the Men: we skinned the Seals and the Penguins, and salted the Flesh in bulk on the Rock, and covered it to keep the Wind from it. Good Weather, and little Wind to Night.

Friday, September 30. The Wind at North this Morning; this forenoon it came to the South-east, and blew hard, and rained. This day I went up the River about ten miles, and *Don Carlos* with me, and ten Men to see for People: we lay out all Night on the South-side, but saw no People; this Night the People of the Country came to our little Well, which is up in the Valley, and stole an Iron Pot, and three suits of Cloaths of the Mens, that were laid there a drying, with some other Linen; but did not meddle with the Beads, which are hung up on a Pole on the Hills, and they will not come near it nor meddle with it. The People of the Country have made in a Valley, the form of the Ship in Earth and Bushes, and stuck up pieces of Sticks for Masts, and redded the Bushes all over with red Earth; the Model I imagine is to record our Ship, for they cannot have any Records but by imitation: This Fancy we let alone untouched, only I laid a string or two of Beads on it, and came away: Close Weather to Night. These People must certainly have received some Injury in former times, from some People that have been here in Shipping, otherwise they would come in sight of us; or else they have heard of the cruel dealings of the *Spaniards* toward the *Indians*, where they lived near. I have used all endeavours possibly by fair means to have Conference with them, but all is in vain.

Tuesday,

Tuesday, October 11. The Wind at West-south-west, a stout gale; very cold, Hail and sleety Snow to day. Our Men are all in good health and are lusty and fat, those which had the Scurvy are got very well with eating of fresh Meat, and such green Herbs as they can get on the shore, as green Pease-leaves and such trade; they mince it, fry it with Eggs and Seal-oil; and it hath raised every Man in as good health as they were at our coming out of *England*. We fare very well, and have great plenty of good Provisions. Here is Provision enough of Seals and Penguins, if salt be plenty, to lade Ships. I can confidently say, that on the *Island of Penguins* there are more Seals and Penguins at this present, than three hundred Tuns of Cask can hold, when dress'd and salted, besides what are going off and coming on. If any Men should have occasion for Provisions of Flesh, if they have Salt, here they may furnish themselves with what quantity shall seem fit for them, and I can assure them it will last four Months sweet, if not longer, if care be taken in bleeding and dressing, and salting, as I have prescrib'd before; the Salt may also be had at *Saint Julian's* Salt-pond in Summer time; also I believe that Salt may be had at *Port Desier* in the Summer-time, for here is some dried Salt on the holes of the Rocks. Here are several Flats, where Men may make Pits and let in Salt-water, and so make Salt, as I have seen in other places.

The Penguin is a Fowl that lives by catching and eating of Fish, which he dives for, and is very nimble in the Water; he is as big as a Brant

Goose

Goose, and have no Wings. Its Coat is a doish, grey on their Necks, legged like a Children in they are full of a Crow, only little: they will drive and there you one after another waste away.

Ducks, and C and white Seabirds, and Doves, and October 13. *Desier*, standing at. 49 d. 8 m. Cape, call'd Hill of *St. Ives* as variation here makes in does in.

October 21. V at d. 30 m. So Gallegoes. tary, at the Cape *Virgin* the Latitude And in Long west, 65 d. 42

Goose, and weighs near about eight pounds; they have no Wings, but flat stumps like Fins: their Coat is a downy slumped Feather; they are blackish, grey on the Backs and Heads, and white about their Necks and down their Bellies: they are short legged like a Goose, and stand upright like little Children in white Aprons, in companies together: they are full-necked, and headed and beaked like a Crow, only the point of their Bill turns down a little: they will bite hard, but they are very tame, and will drive in herds to your Boat-side like Sheep, and there you may knock them on the head, all one after another, they will not make any great waste away. Here are a great many Sea-Pies and Ducks, and Ox-Birds, and Sea-Mews, and Gulls, and white Sea-Pigeons, and white-breasted Divers, and Dobchicks.

October 13. I weighed, and sail'd out of *Port Deser*, standing Southward. *Octob.* 16. I was in Lat. 49 d. 8 m. South. *Octob.* 19. I passed by the Cape, call'd *Beachy Head*, by our Men, and the Hill of *St. Ives*, Lat. 50 d. 10 m. The Compass has variation 16 d. 39 m. Easterly. The Land here makes in a Bay, where the River of *St. Cruce* does in.

Octob. 21. We passed by Cape *Fair-weather* in d. 30 m. South-Lat. Here goes on the River *Gallegoes*. *Octob.* 22. We came to Cape *Virgin-Mary*, at the entrance of the *Streight of Magellan*. Cape *Virgin-Mary*, at the North-entrance, lies the Latitude of 52 d. 26 m.

And in Longitude, from the *Lizard* in *England*, west, 65 d. 42 m.

Meridian

Meridian distance from the *Lizard* in Leagues, West, 1062 Leagues.

Variation of the Compass here I find to be Easterly, 17 Degrees.

Here is Anchoring all about this Part of the *Streights*, in the fair way from *Cape Virgin Mary*, till you come into the Narrow. I did not find much Tide any where hereabout, but in the Narrow, and there the Tide runs stronger than it does in the *Hope*, a good matter; the flood Tide sets into the *Streights*, and the Ebb sets out; it keepeth its course, as on other Coasts; it is six hours Flood, and two hours Ebb; it riseth and falls near four Fathom perpendicular; it is an high Water here, on the Change day of the Moon at eleven of the Clock, as far as I could perceive. Many beds of Rock-weed are driving to and fro here. This day at two of the Clock I was a-breast of Point *Possession*; I steer'd from thence West-north west about two Leagues, and then West, and West-south-west, and South-west and by South, rounding by the North-shore: As I shoal'd my soundings, I had 22, and 18, and 16, and 12, and 8 Fathom, sandy, and sometimes gravelly Ground and pebble Stones. I sailed, rounding the shore being unacquainted, and could not tell certainly where the Narrow lay, for it was shut in one Land with the other, so as I could not see the opening. I was open of the Narrow at five a Clock, having a fine gale at North-north east. I steer'd in South-west and by South into the chops of it, but could not get past a League into it; the Tide being bent out and run so strong as I could not stem it.

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I was in danger of running the Ship against steep Rocks, which lie in the North-side, she taking a shear with the Tide, and the Wind was a fresh gale at North-north-east. There grew long Rock-weed on the Rocks; I went and sounded over them, and had five foot Water on them, and fourteen Fathom by the side of them, next the Channel: they come trenting from the point of the Nar- row of the North-side, a mile off. At six of the Clock the Wind came to the North; at eight of the Clock it came to the North-west; it fell very dark, and rained much: I was forced to fall back again out of the Narrow as well as I could; the shore I could not see, it was so dark; it fell a flat Calm, I finding twenty Fathom Water, pebble Stones and oary; I anchored, and rode all Night: Little Wind at South-west, and dark.

It is eight Leagues from the first Narrow to the second, and something better; the Course from one to the other is West and by South, and East and by North. This Reach from the first Narrow to the second is seven Leagues broad, from the North-shore to the South-shore; it shews like a little Sea when one comes into it, for we could not see to the second Narrow, till I had sailed therein three Leagues or more. At the point of the second Narrow, on the North-shore; up to the North-east-ward a mile or two, there is a Bay on the North-shore, and a white Cliff of an ordinary height, which is call'd *Cape St. Gregory*: In this Bay you may ride in eight Fathom Water, fine clean sandy Ground, and a good half mile off the shore: This is a good Road, if the

Wind

Wind be between the North east and the South-west to the Westward; the Winds are given most to blow on the Western-quarter. As I sailed thorough the second Narrow, I sounded in the fair way, and had twenty eight, and thirty Fathom small stones: The North-shore on this Narrow makes in a Bay at the East-point, and is white Cliffs all the way through: This Narrow lies throughout West-south-west, and East-north east, and at the West end of the Narrow the Land is steep up, in white Cliffs, and the South part rounds away in a Fore-land: The South-shore rounds away South-east from this Fore-land, and then it trents away to the Southward in low Land: The North-shore of this Narrow or Streight, rounds up to the Northward in white Cliffs, and falls into shores; there goes in a Harbour which hath four Fathom in the Channel, at High-water; it is a flat round Harbour within, and oary; I called this *Oaz-harbour*. When you are at the West-part of this Narrow, you will see three Islands come open, which shew to be steep up Cliffs: they lie Triangle-wise one of another; they are four Leagues distant from the Narrow, West-south-west: The smallest and Easternmost Isle is call'd *St. Bartholomew's*; the biggest and Westernmost is call'd *Elizabeth's*; the middle-most and Southernmost is call'd *St. George's*, and by some *Penguins-Isle*, and indeed there are many Penguins on it. This Evening I got up to *Elizabeth's*, and anchored in eight Fathoms and an half fine black Sand, two miles off the Island. The East-point bears South and by East of me. Fair Weather all Night, the Wind at South and by West.

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This Morning I went ashore on *Elizabeth's Island*, and at my landing nineteen of the Country-people came off the Hills to me: I had Conference with them, and exchanged Knives and Beads for such things as they had; which were Bows and Arrows, and their Skin-Coats, which are made of young *Guianacoe's* skins; I gave them a Hatchet and Knives, and Beads, and Toys, Trumps, &c. they seem'd to be very well pleased; I shew'd them Gold, which they would have had; I made them signs, that if they had any, I would give them Knives and Beads, &c. for it, or if any where in the Land. I laid Gold and bright Copper into the Ground, and made as if I found it there, and looked to and fro on the Earth as if I looked for such things; they looked one on another and spake to each other some words, but I could not perceive that they understood me, or what I meant; nor that they knew Gold, or any other Metal; they would gladly have had every thing they saw; they tried to break the Boats Iron-grapnel with stones, and would have carried it away; I let them alone, and observed their actions and behaviour, which was very brutish: They catch'd every thing they could reach, although I caus'd them to sit down, and I put strings of Beads about their Necks; still they desired more: My Lieutenant *Peckett* danced with them hand in hand, and several of my Men did dance with them, and made all the shew of Friendship as was possible: My Lieutenant changed his Coat for one of theirs, they desired it because it was red, which colour they much esteem. I was in great hopes I might

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might find Gold among them: I gave them all the courteous Respect I could. After two hours Conference with them, I made signs I would go and get more things, and come again to them. They went, and would have us to Land again under a Cliff, which I judge was their Design, to heave stones into the Boat to sink her, for the place was very convenient for such a purpose. They set themselves down on the Grass, and immediately set Fire on the Grass, on the side of the Bank: By what means they got Fire so suddenly I could not understand. I went and sounded the Channel between *Elizabeth's-Island*, and *S. Bartholomew's-Island*, and found it a fair Channel to Sail through, of a mile broad nearest and deep Water: in the middle thirty eight Fathom, and nine and ten Fathom near the Shore-side, gravelly Sand.

These People are of a middle stature, both Men and Women, and well limbed, and round faced, and well shaped, and low Fore-headed: their Noses of a mean size, their Eyes of the mean and black; they are smooth and even toothed and close set and very white; small Ears: their Hair is smooth flag Hair, and very black and harsh on the fore-part, even and round; and the Locks of a mean length, both Men and Women alike: they are full Breasted, they are tawny Olive-coloured and redded all over their Bodies with red Earth and Grease; their Faces dawbed in spots down their Cheeks with white Clay, and some black streaks with smut, in no Method; their Arms and Feet the like: they have small Heads and small

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Fingers : they are active in Body, and nimble in going and running ; their Cloathing is pieces of Skins of Seals, and Guianacoes, and Otters skins sewed together, and sewed soft ; their Garment is in form of a Carpet, of about five feet square, or according to the largeness of the Person ; this they wrap about their Bodies, as a *Scottish* Man cloth his *Pladding* : they have a Cap of the Skins of Fowls, with the Feathers on ; they have about their Feet pieces of Skins tied to keep their Feet from the Ground : they are very hardy people to endure cold, for they seldom wear this loose skin when they are stirring, but are all naked of Body from Head to Feet, and do not shrink for the weather ; for it was very cold when I saw them, and the Hills all covered with Snow : they have no Hair on their Bodies nor Faces, nor any thing to cover their Privy Parts, excepting some of the Women which had a Skin before them ; otherwise the Men and Women are cloathed alike ; only the Men have Caps and the Women none : The Women wear Bracelets of Shells about their Necks, the Men none : the Men are somewhat larger than the Women in stature, and more full of blood ; the Men have a harsh Language, and speak rattling in the Throat, and gross, the Women shriller and lower : they pronounce the word *Isah*, but what it means I could not understand, nor one word they spake. If they did not like any thing, they would cry *Ur, Ur*, rattling in their Throats : their food is what they can get, either Fish or Flesh ; they are under no Government, but every man doth as he thinks fit ; for

they had no respect to any one, nor under any Obedience of any in this Company; neither did they make any shew of Worshipping any thing, either Sun or Moon, but came directly to us at our first going on Land, making a noise, and every Man his Bow ready strung, and two Arrows a Man in their Hands. Their Bows are about an Ell long, and their Arrows are near eighteen Inches long, and neatly made of Wood, and headed with Flint stones, neatly made broad Arrow-fashion, well fastned to the Arrow; and the other end is feathered with two Feathers, and tied on with the Gut of some Beast, when it is green and moist; the Bow-string is some twisted Gut. These People have very large mungrel Dogs, much like the race of *Spanish* Dogs, and are of several colours: I did not see any other domestick Creature they have, neither could I at this time see their Boats; for they lay at the other end of the Island, next the Main; they waited on this Island for an opportunity of fair Weather, to go to the other Islands for Penguins, there being great numbers of those Birds of the southermost of the three Islands, and many other white-breasted Divers.

October 30. To Night I anchored in a small Bay in eleven fathom Water, gravelly Ground half a mile off the Shore; no Tide runs here as to thwart up a Ship; the Water riseth and fall perpendicular ten Feet. This Bay hath two Rivulets of fresh Water in it, and good Timber trees of eighteen Inches through, and near forty Feet long: the Wood is much like a Beech; here are wild Currant trees, and many such like Bushes

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the Woods are very thick and green, and much old Wood lies on the Ground, so as there is no travelling into the Woods. I was ashore looking to and fro here three hours: I call'd this *Fresh-water Bay*; this is near nine Leagues to the Southward of *Sweepstakes Bay*. Sand-point is a mean low Point, lies out more than the other Points of the Shore, and few Trees grow on it.

It is six Leagues from *Fresh-water Bay*, to *Port Famen* South and North from the one to the point of the other: that nearest *Port Famen* cannot be seen, as you come from the Northward, till you come to bring the Point *S. Anne* up on the North-west of you, for the Bay lies up in a little hook North-west, and the Land on the West side of the Bay is low in a Point, and sandy, and some Grass grows on it, and much drift-Wood lies on it like Carpenters-yard: a little within Land from the Waterside grow brave green Woods, and up in the valleys, large Timber-trees, two foot throughout and some upwards of 40 Feet long; much like our best timber in *England*; the Leaves of the Trees are like green Birch-tree Leaves, curiously sweet; the Wood shews in many places as if there were plantations: for there are several clear places in the Woods, and Grass growing like fenc'd Fields in *England*; the Woods being so even by the sides of it, and on Point *Saint Anne* as you come sailing from the Northward, you will see good oaks and tall Trees grow on the very point of it: this Point is rocky on the Shore-side, but no dangers lies of it; you may be bold on it to get into *Port Famen Bay*.

Here is good Wooding and Watering, and good catching of Fish with the Seyne or Net. I haled above 500 large Fishes ashore at one Hale, much like a Mullet, all scaly Fishes. Here are many large Smelts of 20 Inches long, and many Anchovies, and some small Scates. Here is great plenty of Fish, so much as we feed wholly on it, and salt up much of the *Mullets* and *Anchovies*. Here grow many Trees of good large Timber forty inches through: the Leaves are green and large, much like Bay-tree Leaves in *England*; the Rind is grey on the outside and pretty thick rined. This Rind or Bark of these Trees, if you chew it in your mouth, is hotter than Pepper, and quicker. It is of a spicy smell when it is dry. I cut of the Bark and made use of it in my Pease, and other provisions instead of Spice, and found it very wholestome and good: we steeped it in our water, and drank it, and it gave the water a pretty flavour. There grow these Trees in the *Woods*, in many places in the Streight on both shores, and on the Coasts on both sides of *Patagonia*, before you enter them. This may be the *Winter-Bark* of the shops, which has an Aromatick pepper-like or spicy taste.

Port Famen lies in the Lat of 53 d. 35 m. South and in Longitude West from the *Lizard* 68 d. 9 m. and Meridian distance 1092 Leagues West, as my Account is in my sailing. This Voyage I give no credit to the plain *Sailing*: therefore this *Meridian* distance signifies very little as to Navigation.

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any Timber like ours in *England*: Here are but two sorts of Timber in all these Woods, and one is the Pepper-rind Tree, which is indifferent Wood, and the other is the Timber much like Beech. Here are the best and biggest Trees in all the *Streights*; here are Trees of two foot and an half through, and between thirty and forty feet long; there may be great Planks cut out of 'em. I could not see any Grains of Metal or Mineral in any place, and I looked very carefully in Gul-lies, and places where Water had guttered. Here are some Herbs to be plucked up, as we boiled for Salleting, and green Grasse with it, which relish-ed pretty well. The Land in the Woods is dry, and of a gravelly and sandy Soil, and some places good brown Earth; it is bad travelling in the Woods for old Trees and Under-Woods: The Woods trent all up on the sides of the Hills; the Land all about on the North-west and West of *Port Famen*, trents up to very high Hills, and the In land is very high Hills; for we can see the tops of them all barren and ragged, peeping over those Mountains next to the Shore-side; much Snow lies continually on them. The Land on the South-shore is very high and peaked.

I saw many Ducks and Brant-Geese on the shore-sides, and in the fresh Waters, together with some Whales spouting in the Main Channel.

I do verily believe that in these Mountains, there is some Metal, either Gold or Copper; for the Man that went aboard, pointed up to the Mountains, and spake to me when I shewed him my Ring. These people eat up the Provision

which was carried to them, and greased themselves all over with the Oil, and greased their Skin-Coats with it: I made signs to them to go and get some Gold and bring it to me: some of them went away to their Boats, the rest sat still on the Grass, talking one to another, and pointing to the Ship. Their Language is much in the Throat, and not very fluent, but uttered with good deliberation: I could not perceive but only the younger were obedient to the elder, and the Women were in obedience to the Men; for I took the Mens Coats and put about the Women, but the Men would not suffer them to keep the Coats long, and themselves to be naked, but took the Coats from the Women, and put them about themselves: I proffer'd them to exchange one of my Lads for one of theirs, and they laughed; but the *Indian* Lad would not go with me, but hung back: I gave to the Men Knives and Fish-hooks, and to the Lads Jews-trumps and Pipes, and to the Women Looking glasses and Beads. I did this to gain their Loves, and in hopes to have Trading with them for the future; for they refus'd Brandy.

Cape Froward is the southernmost Land of the great Continent of *America*, and it is very high Land on the back-side of it; the Face is steep up, of a Cliff of Rocks, and it is blackish grey, of a good height, and deep Water very near it. I founded with my Boat to close to it, and had forty Fathom: A Man may lay a Ship close to the face of the *Cape*, for there is Water enough: there is no Ground in the Channel at two hundred Fathoms,

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thoms, and but little Tide, or any rippling as I saw, but a fair Channel to sail throughout; of three Leagues broad from the North-shore to the South-shore. It is best for a Ship to keep nearer the North-shore than the South-shore; for the Winds are more generally of the Western Quarter.

Cape Froward, in *Magellan Streights*, lies in the Latitude of $53^{\circ} 52'$ South.

And in Longitude West, from the *Lizard*, in England $68^{\circ} 40'$ West.

And in Meridian distance in Leagues 1099, and two Miles West.

The Compass hath sixteen degrees of Variation Easterly at *Cape Froward*. As to the Furling Points I cannot say any thing; I wanted a Needle.

November 4. 1670. I was in *Wood's Bay*, call'd so by my Mate's Name. *November 5.* I was a-brest of *Cape Holland*; near which lies *Cape Coventry* and *Andrew's Bay*, also *Corde's* and *Fostcue's Bay*, *Cape* and *Port Gallant*: but for a more exact Situation of the several Promontories, Bays, Ports, Rivulets, Soundings, &c. I refer the Reader to the large Draught of the *Magellan Streights*, drawn by my own Hand on the place.

A-brest of the Bay, two Leagues off, is the Island which I call'd *Charles's Island* and *Monmouth's Island*; more to the Westward is *James's Island*, and *Rupert's Island*, and the Lord *Arlington's Island*, and the Earl of *Sandwich's Island*, and Secretary *Wren's Island*: this Reach I call'd *English Reach*; a League more to the Westward of *Fostcue's Bay*, is *Cape Gallant*.

The Streight shews now, as if there were no farther passage to the Westward : for the South Land rounds up so much to the North-westward, that it shuts against the North Land to a Man's sight. At this distance I saw two large Openings into the South Land, one opposite to *Charles-Island*, the other more to the Westward, up of the round South Bite. There I saw many Whales spouting, that place I called *Whale Bay*. I saw several Brant-geese and Ducks here ; I left in the *Indians* Houses Beads and Knives, in hopes of further Commerce : I saw on the South-side a Fire made on the Grass by the Natives.

From the Pitch of *Cape Froward*, to the Pitch of *Cape Holland*, the Streight lies in the Channel West and by North, nearest, and is distant full five Leagues ; and from the pitch of *Cape Holland*, to the pitch of *Cape Gallant*, the Streight lies in the Channel West and by North, a little Northerly, and is distant eight Leagues. From the Pitch of *Cape Gallant*, to a low Point three Leagues to the Westward, the Streight lies in the Channel North-west and by West, a little Northerly. This Reach is not more than two miles broad, from the North-shore to the Islands, which I called *The Royal Isles* : When I was a-breast of the Westernmost Island, which I called *Rupert's Island*, being on the middle of the Channel with the Ship, I shot off one of my Sakers with a shot, and the shot lodg'd close to the Islands side. This low Point, a breast of *Rupert's Island*, on the North-shore, I called *Point-Passage*. This Evening at half of the Clock, I was shot past *Point-Passage*, half

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Monday, November 7. Cloudy gusts, foggy Weather, the Wind at West, and sometimes at North-west: I rode fast all day close aboard the shore. This Afternoon I went in my Boat over to the South-side, opposite to *Elizabeth's Bay*, at the Point call'd *Whale Point*, for the many Whales spouting thereby. I travell'd up the Hills two miles, but could not see any Gold or Metal; the Land very irregular and Rocky, with mossy kind of Grass growing on it, and very boggy and rotten; for I thrust down a Lance of sixteen Feet long, into the Ground, with one hand very easily. Here grow many Juniper Trees, some of a foot throughout, the Wood not very sweet. Here I saw many Brant-Geese and Ducks, much Snow on the inland Mountains, so as I could not travel any farther: I returned down to the Boat again: I saw where the Natives had been by the evening of the Grass, but I could not have a sight of any. Here are many good Muscles on the Rocks of five inches long, and good Fish in them, and many good Pearls in every Muscle: Here are also large limpets, and Sea-eggs among the Rocks.

All the Ripling is not worth the taking notice of, for it is but an hours time on both Tides Ebb and Flood, when the Tide runs strong; neither are the Tides any thing prejudicial to the Navigation of the Streight, but rather advantageous to help to turn from Road to Road either way: For we have had a benefit of them in plying from place to place. The Weather indifferent this Afternoon:

noon; I went ashore after I had done Sounding, but saw no People, nor any Metal; the Woods very thick, and several Trees of the hot Bark, the other Trees much like Beech-timber: some Ducks and Brant-Geese seen on the Shore side.

The Streight in this Reach between *Elizabeth's Bay* and *St. Jerom's River* is about two Leagues, broad and high Land on the South side; which hath several brave Coves on it like the Wet Dock at *Deptford*, and safe to lay Ships in them from either much Wind or any Sea. This Bay I call'd *Muscle Bay*, for in it there are many and great plenty of good Muscles. The Shore-sides are rocky steep too in most places; no Ground in the main Channel at an hundred Fathom; also in the Bays on the South-side it is deep Water, and small Islands lie in the Bays, and close along the South shore lie small Islands. Here are many Whales and I saw many Penguins, and some Seals. The Shores are woody on both sides, but ragged Timber and boggy Ground; the tops of the Hills bare Rocks and irregular. Several streams of Snow-water run down in the Cliffs of the Hills two Leagues to the Westward of *Elizabeth's Bay*. On the North-shore the Land is low and woody near the Water-side, and up of a Valley in the Low-land: In this Valley there runs a fresh Water-River; I went into it with my Boat: It is but shallow at low Water, hardly Water enough for my Boat: Here I saw several Arbours of the *Indians* making, but no People. This River is a very convenient place to lay Shallops, or such like small Vessels in it; they may go in

it at high Water, or nine feet. *Batchelor's* in the *Streight* or ten, or twelve, a fair birth ordinary, and toward, and the *Jerom's Channel* comes along this Road to the Road: This latterly Winds neither shall give way, he away; for Winds that blow to these and the West, are made the Mountain Winds felt have observed to the East, the side, and they trees are stre Hills, but on trees are much supplied, and the Water At *Cape Queen*, as if they make near

it at high Water, for the Tide riseth here eight
or nine feet: this River I call'd by the Name of
Batchelor's River. Before the mouth of this River,
in the *Streights*, there is good anchoring, in nine,
or ten, or twelve Fathom Water, sandy Ground;
a fair birth off the Shore: the Tide runs but or-
dinary, and the Floud-tide comes from the West-
ward, and the Tide that comes out of *St. Je-*
rom's Channel, makes a rippling with the Tide that
comes along the stream of the *Streight*: I call'd
this Road that is before *Batchelor's River*, *Tork-*
Road: This is a good place to ride in with We-
sterly Winds, for here cannot go any great Sea;
neither shall a Man be embayed; that if a Cable
give way, he may have the *Streight* open to carry
it away; for the Westerly Winds are the greatest
Winds that blow here by the Trees, for they all
scoop to these Winds, and lean to the Eastward;
and the West-side of all the Trees that stand o-
pen, are made flat with the Winds: the tops of
the Mountains look to the Eastward; the Easter-
ly Winds seldom blow strong here as to what I
have observed. By the Shore side which lies open
to the East, the Grass grows down to the Water-
side, and they are the greener Shores, and the
trees are streight and tall on the East-side of the
Hills, but on the West shores, the Grass and
trees are much weather-beaten, worn away, and
suppld, and the Shore sides much tewed with the
force of the Waters.

At *Cape Quad*, the Land shuts one with the o-
ther, as if there were no farther passage: But as
you make nearer to it, you will see the opening
more

more and more, as the Streight rounds there more to the Northward again. *Cape Quad* is on the North-shore; and it is a steep up *Cape*, of a rocky greyish Face, of a good height before one comes at it: it shews like a great building of a Castle; for it points off with a Race from the other Mountains, so much into the Channel of the Streight, that it makes shutting in against the South-land, and maketh an Elbow in the Streight. The Streight is not past four miles broad here, from shore to shore; and the Land is steep too on both sides, and rocky; the Mountains high on both Shores, and craggy barren Rocks: some Trees and Bushes growing here, and much Snow on the Mountains on both sides. Opposite to *Cape Quad* on the South-side, there is a fine large Bay, which is call'd *Rider's Bay*: I did not go into it; if there be Anchoring in it, it is a fair Road for any Winds: the Water is very deep here in the Channel, no Ground at one hundred Fathom: this part of the Streights, from *Point Passage* to *Cape Quad*, is the most crooked part of all the Streight; therefore I call'd this *Crooked Reach*. Here are two small Islands in the North-shore, to the Eastward of *Cape Quad*.

November 14. This Morning I was a-brest of *Cape Munday*; so I call'd it, it being a Cape on the South-side, and is distant from *Cape de Quad* about thirteen Leagues: the Streight here is about four miles broad, and the North-shore makes into the Land with great sounds and broken Islands: the Land on both Shores is high rocky Hills, and barren, very little Wood or Grasse growing on

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them : Here at *Cape Munday*, the Streight grows broader and broader to the Westward, but keeps all one Course, North-west and by West to *Cape Upright* ; which is a steep upright Cliff on the South-side, and it is distant from *Cape Munday* four Leagues. Here the Streight inclines to the Westward near half a Point : the Streight lies from *Cape Munday* West north-west, half a Point Northerly right out into the South-Sea, if you be in the middle of the Channel, or nigh the North-shore ; I find little or no Tide to run here, or Current : no Ground in the Channel at two hundred Fathom, a Musket shot off the Shore, on either side. Here run into the South-shore many Sounds and Coves : I have sail'd fair along by the South-shore all this day ; for the North-shore makes in broken Islands and Sounds : Here lie all along the South-shore several small Islands, but no danger, for they are all steep too : the Streight is a very fair Channel to sail throughout. This day at Noon, I was a-breast of an Island, which lies on the North side of the Streight, I call'd it *Westminster Island* ; there lie a great many Islands between that and the North-shore, and to the Eastward and Westward, and also some broken Ground, and Rocks lie about it : These Islands I call'd *The Lawyers*, and this Island which I call'd *Westminster Island*, is an high rocky Island shewing like *Westminster-Hall* ; the Streight is five Leagues broad, between *Westminster Island* and the South-shore ; but between that and the North-shore, there are many rocky Islands and broken Ground.

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The Streight lies from *Cape Munday* to *Cape Deseada*, West-north-west, and East-south-east, half a point Northerly, and half a point Southerly, nearest, and they are distant from one another near fifteen Leagues: From *Cape Quad* to *Cape Deseada*, it is about twenty eight Leagues; and the Streight lies near North-west, and by West from *Cape Quad* into the South-Sea, and near in one Reach, which I call'd *Long-Reach*: and some of my Company call'd it *Long-Lane*. This part may properly be call'd the *Streights*; for it is high Land all the way on both Shores, and barren Rocks, with Snow on them; and indeed from *Cape Quad* into the South Sea, I call'd this Land *South-Desolation*, it being so desolate Land to behold.

Cape Deseada lies in the Latitude of 53 d. 10 m. South.

In Longitude West from the *Lizard* of England 72 d. 56 m.

And in Meridian distance 1149.

The Compass hath 14 d. 10 m. Variation Easterly here.

Cape Pillar lies in the Latitude of 53 d. 5 m.

In Longitude West from the *Lizard* of England 72 d. 49 m.

And in Meridian distance 1148 Leagues West.

I make the whole length of the *Streights* of *Magellan*, from *Cape Virgin-Mary* to *Cape Deseada*, with every Reach and turning, to be one hundred and sixteen Leagues: and so much I sail'd from the one Sea to the other, according to my estimation.

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The best Land-fall in my Opinion, is to make the face of *Cape Deseada* for to come out of the South-Sea to go into the Streight of *Magellan*; they lie in East and West at the first, till you come to the brest of *Cape Pillar*; then the Course is South-east and by East nearest. Be careful to keep the South-shore in fair view; for the North-shore is broken Islands and Sounds, that a Man may mistake the right Channel or Streight, and steer up into one of them, as he comes out from the South-Sea, if he lose sight of the South-shore.

Here lie four small Islands at the North part of the mouth of the Streight, in the South-Sea; they lie pretty near together: the Eastermost stands singly by it self, and is round coping up of a fair height like an Hay-cock, or Sugar-loaf: the other three are flattish; they lie from *Cape Pillar* North-west, by the true Compass of 6 Leagues off; they are distant from *Cape Victory*, near four leagues South-west; I call'd them *The Islands of Direction*: they are good wishing to fall with the South of the Streight.

November 26. The Land makes in Islands, lying near the main Land, is high and large Hills and land, which stretch North and South, some now lying in the tops of the highest Hill. At eight of the Clock I made the Island of *Nuestra Señora del Socoro*; in the Spanish Tongue it is call'd *The Island of our Lady of Sucore*; I steer'd with North-east and by East; it made rounding up the Eastermost end, and lower in the middle at either end: it maketh with a ridge running from one end to the other, and Trees growing

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ing on it: the Shore-side is rocky on the South-side of the Island, and some broken Rocks lie near the Shore-side; and on the South-east end of the Island there stand two peaked coping Rocks close to the Shore; they are white on the top with Fowls dung. The Island is of a fine height, and all woody on the North-side of it; the Trees grow down to the Water-side, and fresh Water runs down in five or six Gullies: the Woods are all green, and very thick spicy Trees.

Meridian distance, at Noon, from *Cape Pillar* East 20 d. 0 m. 4 ten.

Longitude at Noon from *Cape Pillar*, East 1 d. 19 m.

Longitude at Noon, from the *Lizard*, West 71 d. 42 m.

Meridian distance, at Noon, from the *Lizard* West 1128 leag. 2 mil. 9 ten.

The Island *Nuestra Senora di Socoro*, lies in the Latitude of forty five degrees South, and in Longitude East from *Cape Pillar* one Degree nineteen Minutes; Meridian distance from *Cape Pillar*, East 20 leag. 0 min. 4 ten.

Meridian distance from the *Lizard*, West 1128 deg. 2 min. 9 ten.

Longitude from the Meridian of the *Lizard* West 71 deg. 42 min.

The Compass hath eleven Degrees, Variation Easterly here.

I went ashore with my Boats for fresh Water which I had them laden with presently; for here fresh Water enough, and very good: I searched the Shore what I could, I saw an old Hutt

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Arbour of the *Indians* making, and several sticks that were cut, but all old done. I could not see any sign of People on the Island now; I believe the People come rambling to this Island from the Main in the best season of the Year to get young Fowls: for I do not see any thing else in the Island for the sustenance of Man's Life: I could not see any kind of Mineral or Metal: the Soil is a sandy black Earth, and some Banks of Rocks: the Island is irregular, and grown all over with impenetrable thick Woods, so as I could not see the inward part of it: the Woods are ordinary Timber, none that I saw was fit to make Planks of; the nature of the Wood is much like Beech and Birch, and a sort of heavy Wood good for little but the fire, it is white: no Fruit or Herbs; very little Grass, the Woods are so thick; much kind of long ledgy Grass; no wild Bea't to be seen; several small Birds in the Woods like Sparrows: there are several Fowls like Kites in the Woods, several black and white Brant Geese and pied Shags, and other such Sea Fowls, as Pinks and Sea-mews: what else the Island affords I cannot tell. I made a Fire on the Shore, in hopes to have some answer of it on the Main, but had not. At Noon I went aboard, and sent my Boats ashore again for more Wood and Water, whilst the Weather permitted landing.

November 30. This Forenoon I was over on the main side, the Ship lay off, and in. I went ashore with my Boat on an Island which lieth adjacent to the Main: There runs a Channel between that and the Main, and many Rocks lie

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in it, and foul Ground, so as I durst not venture the Ship in it. This Island shewed as if it had been the Main, till I went to it with the Boat; being about four Leagues long from the North-point to the South-point, and in some places a League broad. The Island is of a mean height, and in some places two Leagues broad, and grown all over with Woods very thick: the Timber is such like as is on the Isle of *Socoro*. I could not see any kind of Mineral or Metal in it; the Shore-side sandy in many places, and rocky in others: the Earth on this Island is of a sandy black soil, but very wet with the continual Rains that are here. Not finding this noted in my Draughts, I call'd it after my own Name *Narbrough's Island*; I took possession of it for his Majesty and his Heirs: I could not see any People, or any sign of them here.

South-east from *Narbrough's Island* on the Main distant about three Leagues, there runs into the Land a River or Sound, and some broken ground lies before it. The Shore-side is rocky, and the Hills are high in the Land on both sides of it. This opening lies in East and West; I take it for that place which in the Draughts is call'd *Saint Domingo*. This place lies in the Latitude of four Degrees, fifty Minutes South; and more to the Southward thereof lie many round copious high Islands grown over with Woods: all along the Coasts as far as I could see, there lie Islands adjacent to the Main, and they are of a great height.

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This Day all the Bread in the Ship is expended: all the Company of the Ship, my self, as well as any other, eat Pease in lieu of Bread; my Company are all indifferent well in health, I thank God for it, being seventy two in Company: no ill to be taken with Hooks: many Porpusses seen, and some Whales: several Sea Fowls seen swimming to day: much Wind to Night at North-west: I ride fast, but doubtful of my Cable.

No-Man's Island lies in the Latitude of forty three Degrees, forty seven Minutes South, and Longitude West, from the *Lizard* in *England* twenty one degrees, thirty two minutes. And in Meridian distance from the *Lizard* of *England*, one thousand one hundred and twenty six Leagues and one Mile; and in Meridian distance from *Cape Pillar* East, twenty two Leagues, two Miles, and two tenths; and in Longitude East from *Cape Pillar*, one degree, twenty nine minutes $\frac{1}{2}$. The Variation of the Compaſs is ten degrees Easterly.

This Island is that which the Draughts make to be at the South-end of the Island of *Castro*, at the Mouth of the going in of that Channel, which is between *Castro* and the Main; the Draughts are false in laying down of this Coast; for they do not make any mention of the several Islands which lie on it, but lay it down all along to be a straight Coast: the Latitude of most places are laid down very near as what I have found. Here are many Islands adjacent on the Coasts more westerly, in the Latitude of forty five and an

December 15. *Don Carlos* was put ashore, and carried with him a Sword, and a Case of Pistols, and his best Apparel, and a Bag with his Beads and Knives; together, with Scissars, Looking-glasses, Combs, Rings, Pipes, Jews-harps, Bells and Tobacco; all which things he had of me to give to the Natives. At seven of the Clock *Signior Carlos* was set ashore, on the South-side of the Harbour of *Baldavia* without the Mouth of it a Mile, in a small sandy Bay, about two Miles within Point *Gallere*, between the Point and the Mouth of the Harbour. When he was ashore, he took his leave of my Lieutenant, and bad him go aboard and look out for the Fire in the Night. He went from the Boat along the Sea-side in the path toward the Harbour's Mouth: the Men in the Boat saw him go along for the distance of a quarter of a Mile, till he turned behind a point of Rocks out of sight. The Shore-side is low and sandy, and some scattered Rocks lie in it: the Land riseth trending to large Hills: the Land all woody and very thick, that there is no travelling but by the Water-side. My Lieutenant went ashore to the edge of the Woods, and gathered several green Apples off the Trees: for there grow Apple-trees on the Shore side, much like our *European* Winter Fruit; the Apples are bigger than Walnuts with their shells on; whether the Trees are planted by the *Spaniards*, or grow naturally in the Country, I cannot tell.

I do not find any Current or Tide to set on this Coast, that is any way prejudicial to Navigation; neither do I find the Winds to blow Tra-

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The Mouth of the Harbour of *Baldavia* on the Coast of *Chile*, in the South-Sea, lieth in the Latitude of 39 d. 56 m. South.

And in Longitude West, from the *Lizard* of England 70 d. 19 m.

And in Longitude East, from *Cape Pillar* 2 d. 41 m.

And in Meridian, distance from *Cape Pillar*, East, 41 leag. 2 mil. $\frac{1}{2}$.

The Account I make by my sailing from the Meridian of the *Lizard*, according to my daily Account of my Ships way. I do not make any Account of plain Sailing to be fit for Seamen to observe; but the best Navigation is by *Mercator*, sailing according to the Circle of the Globe, which I ever sail'd by, and keep my Account of Easting and Westing by *Longitude*, which is the best and most certain Sailing, to give the true description of the Globe. I have noted down the Meridian distance I made daily, whereby such Navigators and Seamen as know better, may have that to give them the knowledge of the distances of places, according to their Understanding. Most of our Navigators in this Age sail by the Plain chart, and keep their Accounts of the Ships way accordingly, although they sail near the Poles; which is the greatest Errour that can be committed; for they cannot tell how to find the way home again, by reason of their mistake; as I have some in the Ship with me now that are in the same Errour, for want of Understanding the

true difference of the Meridian, according to their Miles of Longitude, in the several Latitudes. I could with all Seamen would give over sailing by the false plain Chart, and sail by *Mercator's* Chart, which is according to the truth of Navigation. But it is an hard matter to convince any of the old Navigators, from their Method of sailing by the Plain Chart; shew most of them the Globe, yet they will talk in their wonted Road.

At eight of the Clock in the Forenoon, my Boat put from me, and rowed to the Shore within Point-Gallery, to the place where *Don Carlos* was landed: I laid off and on with the Ship before the Port; the Boat rowed all along the Shore by the place where *Don Carlos* was landed, and along the Shore in the Harbour. At the Points on the South-side of the Harbour stands a small Fort of seven Guns, call'd *St. James's Fort*: My Boat came suddenly on it, and before they perceived it to be a Fort, they were within shot of it. The *Spaniards* stood on the shore; and waisted with a white Flag, and call'd to them; My Lieutenant rowed to them, and asked of them what Country they were? they answered, of *Spain*: They asked my Lieutenant of what Country he was. He answered, of *England*; they asked him to come ashore, which he did, in hopes to have seen *Don Carlos* there; for that Path that *Don Carlos* went in when he was landed, led directly to the Fort by the Sea-side, and it was not a Mile from the Fort to the place where he was landed, so that he must go to this Fort, and be upon it before he was aware of it, unless he knew it before. The

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path went all along between the Woods and the Sea. In the Woods there is no travelling, they are so thick, and grow on the side of an Hill; the Fort stands just by the Wood side on a race of the Bank, of five yards ascent from the Sea, with a Bank of Earth cast up before the Ordnance, and eight Pallisadoes plac'd in an Half-Moon, four yards distant from the Guns to the Southward; which Pallisadoes are to keep the Natives from running violently on the Ordnance: so these *Spaniards* guard themselves with long Lances against the Natives in the Fort. The *Spaniards* have Match-lock Musquetoons, but they are very ordinary ones, and they are as silly in using them.

At my Lieutenant's landing, about twenty *Spaniards* and *Indians* came to the Water-side in Arms, and received him and his Company ashore, and carried him some twenty yards from the Water-side up the race of the Bank, under a great Tree, where the Captain of the Fort, and two other *Spanish* Gentlemen, received him under the shade with great Courtesie, after the *Spaniards* Ceremony; they sat them on Chairs and Benches placed about a Table, under the shade; for the Sun shone very warm, it being a very fair Day. The *Spanish* Captain call'd for Wine, which was brought to him in a great Silver Bowl; He drank to my Lieutenant, and bid him welcome ashore, and caused five of his Ordnance to be fired, being glad to see *English* Men in this place, and told him that this was *Baldavia*, speaking very kindly, and how welcome they were to him: After every

one had drank, and my Lieutenant had thanked him for his Entertainment, he desired my Gentlemen to sit down, and he discoursed with them, and ask'd from whence they came, and for what way they came into this Sea, and what their Captain's Name was, and if there were Wars in *England*. My Lieutenant answered him to his demands. My Lieutenant asked him, if they were in Peace with the *Indians*? He answered, that they were at Wars with them round about, wasting his Hand round the Harbour, and that they were valiant People and very barbarous, and fought on Horse back, and did them much spoil; and that two days before, the *Indians* came out of the Woods and kill'd a Captain, as he stood at his Duty by the side of the Fort, and cut off his Head, and carried it away, sticking on their Lance. He shewed my Lieutenant the place where the *Indians* came out of the Woods, and the place where the Man was kill'd. They seem to be very fearful of the *Indians*, for they will not stir any way, but they will have their Piece or their Lance with them. It is a manifest sign they are much afraid of the *Indians*: also they have no more ground than the Fort; neither do they clear any of the Woods on this side of the Harbour, nor walk at a Musquet shot distance from the Pallisadoes, along the Woods-side. The *Spaniards* say that the *Indians* have much Gold, and that their Armour for their Breast is fine beaten Gold, &c.

In the Afternoon a Dinner was brought out of the Fort to the Tent, where they were, and placed on the Table: The first Course was Soppas, the

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Olleos, then Pullets, then fresh Fish, all dressed with hot Sauce, and very good Diet it was; the first Course was Sweet-meats: every Course was served in Silver Dishes, and all the Plates were Silver, and the Pots and Stew-pots, and all the Greenfils belonging to the dressing of the Provisions were Silver; the Basin wherein they brought Water to wash their Hands was in like manner made of Silver, very large, and the Hilts of the Soldiers Swords were Silver, but the Hilts of the Officers Swords were Gold of good value: Moreover, the Plate at the But-end of the Stock of their Muskettoons was of the same Metal, and the Pipe that the Rod runs in was Silver; as also the Top of the Gun-stick, and their Tobacco Boxes, and Staff-Boxes, and the Staves which they walk with were headed and ferrelled with Silver, and ferrelled on the joynts with Silver. Indeed they were Masters of much Silver and Gold, and it was but little esteemed among them. Their Language was *Plata no vallanada machoro in*

them.
Four *Spanish* Gentlemen desired to go aboard my Lieutenant, and see the Ship, and Pilot into the Harbour, if I would come in, which they did not question but I would, as I understood afterward by a *Spaniard* that came aboard me, who revealed to me their whole Design, that they intended to surprize the Ship, which I took care to prevent, giving them no opportunity: For it hath been a general practice with *Spaniards* in *America*, to betray all foreign Inhabitants in these parts; as I had read of their treacherous

cherous dealings with Captain *Hawkins* at *Saint Juan de Ulloa*.

I had much Discourse with the *Spanish* Gentlemen this day concerning *Baldavia*, and the Country of *Chile*. They tell me they have much Gold here at *Baldavia*, and that the Natives do much hinder their getting of it; for they are at cruel Wars with 'em, and will not permit 'em to plant any thing near hereabout, nor at *Baldavia*, but they come and destroy it with Fire. And that the Natives are very cruel and barbarous. If they take any *Spaniard*, they cut off his Head, and carry it away on their Lances end. These *Spaniards* tell me, that they live here as the *Spaniards* do at *Mamora* in *Barbary*, having their Enemies round about them. These *Spaniards* say, that the *Indians* are tall Men, and of a Gigantic Stature, and extremely valiant, and that they fight on Horse back, eight and ten thousand Men in Arms, and well disciplin'd. The *Indians* have much Gold, and their Weapons are long Lances, and Bows and Arrows, and Swords, and some Musquets, which they have taken from the *Spaniards*, and know how to use them in Service; taking all Ammunition, &c. The *Indians* are very populous in the Land about *Baldavia*, and at *Orfons*, and on the Island of *Castro*, and at *Chile*, and that they have much Gold on these parts about *Orfons* and *Chilue*, and that they trade with the *Spaniards*, and give them Gold.

This Captain said, that they have six great Ships going yearly from *Lima* to the *Philippine* Islands, to the Port of *Mannelos*, and that they

have a great Trade with the *Chineses*; and that these Ships sail from the *Calleo* that is the Port of *Lima*, in the Month of *Januar*, and their passage is but little more than two Months, from *Lima* to the Port of *Mannelos*, and they sail it within the Tropicks, and have much Easterly Winds; and they return back by the Northwards, to gain the Westerly Winds, which brings them to *California*, and to the Port of *Aquapulco*, which lieth on the West Coast of *Nova Espana*, and from thence they come to *Panama*, and then to the Port of *Lima*. They bring rich Lading, much Silks and other rich Commodities, and Spices and Callicoets. The *Mannelloes* have a great Trade with the *Japoneses* and *Chineses*, which is very beneficial to them. The Captain demanded of me whither I was bound? I answer'd him, I was bound for *China*, and that I had rich Lading for that Country; and that I only touch'd in at this place, knowing here were Settlements of the King of *Spain's* Subjects, hoping here to have Wood and fresh Water, and refreshing for my Men, whereby I might the better proceed on my Voyage. He said, I should have what the Country would afford, and that the Captain of the Fort had sent for Provisions for me, and that I might have Water on the shore-side, pointing his hand to the Place which was near by; the Captain said it was *Aqua del Oro* (which is *Water of Gold* in *English*.) This saying caus'd me to laugh; then he said, it came running from the Hills where they find Gold, and that there was Gold in that Rivulet. I asked him how they get the Gold? He said, they wash the

the Earth which is in the Mountains, and find the Gold in the Bowl or Tray when the Earth is washed out. And they buy much Gold of the *Indians*, which they gather in the Gullies of the Hills, which is washed in there by the Rains, and snow dissolved, which descend from high Mountains, which they say are very high and barren Rocks, thirty Leagues In-land from the Sea-shore. The Land between those barren Hills and the Sea-shore, is mighty good Land, and the Country very fruitful, abounding in many Plains, and much Cattle that the *Indians* have; as Horses, and Cows, and Goats and Sheep, which they have taken from the *Spaniards*, since they came into the Country. The *Spaniards* call the high rock Mountains the *Andes*, and say that those *Andes* run all along the Land from *Magellan* Streights in a row to *S. Martha*, which is in *Terra firma*, not far from *Cartegean*.

The most Gold in the Land of *America* is in *Chile*, as what is known at this time. But I find the *Spaniards* have but little knowledge of the Land all along to the Southward, from *Baldr* to the Streights Mouth, as far as I can understand by them, excepting at the Island of *Castro*. There they have a Settlement, and on the Main against *Castro* at a place called *Orsono*: At these two places they have good store of Gold, and there are many *Indians*; but farther Southward than *Castro*, they know nothing of the Country or of the Sea-Coast. *Castro* lieth in the Latitude of 43 d. 30 m. the South-end of the Island, the North-end lies in the Latitude of 41

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It is a fine Island, and near the Main, there grows good Wheat on it. The *Spaniards* are but few in number there, but there are many *Indians* and those too valiant and of a large stature; but not Giants as I understand: These *Indians* have Wars with the *Spaniards*, and will not suffer them to search the Country for Wealth.

A Ship brought from *Lima* Provisions for the City of *Baldavia* and the Forts, and Cloths, and Ammunition, and Wines, and Tobacco, and Sugar; and she lades away from *Baldavia* Gold and Bezoar Stone, and red Wool, &c. and *Indian* Slaves that the *Spaniards* take here in these parts; they carry them to *Peru*, and make perpetual Slaves of them there; and the *Indians* of *Peru* they bring hither, and make Soldiers of them against the *Chile-Indians*, of which Soldiers there are many hereabout, whom my Men saw when they were at the Fort. There were about thirty *Indian* and *Mustefes* Soldiers there, and some sixteen white Men who were Officers. Moreover, the *Spaniards* make use of the *Peru-Indians* to Trade with the *Chile-Indians* for Gold, although they are at Wars. For they of *Chile* without doubt are desirous of Trade, whereby they may furnish themselves with Knives, and Scissers, and Combs, which are wanting among them; as also with Arms that many times by stealth are sold to them, tho' they be prohibited. Traders will be dealing as they can get benefit, they do not consider the future danger by its means, provided it miss them at the present.

I ask'd them how far it was to *Baldavia*? they answered me, three Leagues, and that the Boats could go up to it, and that it was situated by the side of the River and the Plains, and that there were five great Ordnances in a Fort to command the City, and that there were one thousand Inhabitants in the City of all sorts of Men, Women and Children. I ask'd him, if there were any passage by Land from *Baldavia* to the other part of *Chile*? they said there was, and they sent every Week, but they went with good Guards to be secure from the *Indians*. Then I ask'd them if they built Shipping here? they said No, but at *Pelparrazeo* they did build great Ships. I ask'd them who liv'd in the Island of *Mocha*? they said *Indians*, many Men and Women, and that there were *Poco Amigo's* to them; in *English*, they were but small Friends to the *Spaniards*. There are many Sheep, Goats, Hogs and Hens, which the *Indians* will sell for Hatchets, Knives and Beads. As to the Island of *St. Mary*, the *Spaniards* are Masters of it, and have a Fort on it with five Guns, but few *Spaniards* live there: it is plentiful in Provisions, as Hogs, and Sheep, and Corn, and Potatoes: and they said there is some Gold, that the *Indians* have on the Island of *Mocha*, but they will not part from it. The *Spaniards* did not care in answering me to such things as I would gladly have heard of these parts; for I laid the Draught of all that Coast on the Table before them, and I ask'd them who liv'd at this Port, and who liv'd at that: at some places they would say the *Spaniards* liv'd there, and some the *Indians*;

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they did not care to answer my desires, but frame Discourses to wave mine. I find that they are but little acquainted on the Coasts to the Southward of *Baldavia*; they say, they have *Spaniards* living on the Island of *Castro*, and that much Corn grows there, more especially *Euro. Wheat*; and that on the Main there are *Spaniards* living at a place called *Orsono*, which is adjacent to *Castro*, and that there they have Gold, and there are many *Indians*. I asked him if Shipping could go in between *Castro* and the Main: they would not tell me, or would not; but they said the Ships went thither, which come from *Lima* ask for Furniture for the People.

The Anchoring at the Island of *Mocha* is on the North-north east part of it, in a sandy Bay in eight Fathom Water near the Shore; a North-east Wind is the worst Wind for the Road. On the North side of *Mocha* there lies a ledge of Rocks, and some broken Rocks on that part of the Island are scattered from the Shore.

The Anchoring at the Island of *St. Mary* is on the North-side in a fine sandy Bay, in eight or ten Fathom Water, a fine Birth from the Shore; a North-north-west Wind is the worst Wind for that Road. There is Wood and fresh Water on both the Islands, as the *Spaniards* report. The Houses are but mean on the Coast, and the Flood comes from the Southward, and rises about eight or nine feet Water.

The Island of *Mocha* lies in the Lat. of 38 d. South.

The Island of *St. Mary* lies in the Lat. of 37 d. South.

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They have Apples, and Plums, and Pears, and Olives, Apricocks, Peaches, Quinces, Oranges, Lemons, and many other Fruits. There are also Musk-Melons, and Water-Melons, &c. The *Spaniards* report it to be the finest Country in the whole World, and that the People live with the greatest Luxury of any on the Earth; they enjoy their Health with so much delight, and have so much Wealth and Felicity, that they compare the Land to *Paradise*, abounding above other Countries with all Delights for Mankind.

I saw a good Testimony of the healthiness of the Country, for these four Men who are on Board, are as well-complexioned Men as ever I saw in my days: and the People ashore, both Men and Women of the *Spaniards* are well-complexioned People, of a ruddy colour, and seem to be mighty Healthy. Some of the Men are very corpulent, and look as if they came from a very plentiful Country, where there is great store of Provisions, and abundance of Gold and Silver.

December 17. 1670. There went ashore from the Boat eighteen of my best Men I had in the Ship, and Men of good observation to inquire into matters of this Concern, which I had acquainted them with; as touching the manner of the Harbour and the Fortifications the *Spaniards* have, and the disposition of the People, and that it was my whole desire to have Commerce with the Natives of the Country that was at Wars with the *Spaniards*, if by any means possible it may be obtained; for it is my whole

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fire to lay the Foundation of a Trade there for the *English* Nation for the future; for I see plainly this Country is lost for want of the true Knowledge of it.

My Men in the Boat observed the Harbour and the Fortifications, and took good notice of the People. The *Spaniards* bought several things of my Boats Crew: and paid for what things they bought in good Pillar Pieces of Eight; they would not part from any Gold, although my Men were desirous to have some rather than Silver for their Goods; neither would they part from any Bread in payment, pretending that they should have Bread to morrow from *Baldavia*. The things which they bought of my Men at this time, were two Fowling-pieces, which cost in *England* about twenty Shillings apiece, and the *Spaniards* gave sixteen Pieces of Eight apiece for them; and Cases of Knives of three Shillings the piece in *England*, the *Spaniards* gave five Pieces of Eight for them; and for single ten-penny Wires; they gave a Piece of Eight a-piece for them; and for ordinary Leather-gloves, of ten pence the pair, they gave a Piece of Eight a pair; for Broad-cloth-Coats of the Seamen's, which cost sixteen shillings in *England*, they gave nine Pieces of Eight for a Coat. They were very desirous to buy Cloaks, and Pieces of Bays-cloth. The men were very gallant in Apparel in their Plush-coats, and Under-Garments of Silk and Silver wrought together, and good Linnen, and good *Anders* Laces, and broad about the Crown of their Hats, in Fashion of a Hat-band, and a

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great Silk-scarf with Gold Lace on the ends of it, that was cross over their Shoulders; a short Cravat of Linnen about their Necks, and a Cane in their Hand headed with Silver; their Shooes, and Stockings, and Breeches after the *Spanish* Fashion. They were very kind to my Lieutenant and Men, and treated them very courteously. They were not permitted to go into the Fort, but were entertained in a Tent by the Fort. Four of the *Spaniards* Wives would needs go into the *English* Boat, and sit down on the Benches, to say that they had been in a Boat which came from *Europe*. These were very proper white Women, born in the Kingdom of *Peru*, of *Spanish* Parents; they never had been in *Europe*. The *Spaniards* have some *Indian* Women to their Wives: The Women were all well apparelled in Silks after the *Spanish* Fashion, and about their Necks great Gold Chains, and Pendants at their Ears of Sapphyr Stones, &c.

The Captain of *St. Jago's Fort* presented my Lieutenant with a Silver Tobacco-box, and a Silver-headed Cane, and a Plume of Ostriches Feathers, which he wore on his Hat at the same time: The Feather of the Plume is but small, nothing so good as the *Barbary*-Feather: This Plume was of red, and white, and blue Feathers dyed in the Country. I saw another Plume which a *Spanish* Gentleman gave to Mr. Wood which was black and large, and a very fair one made of the Ostriches Feather of the Country. There are many Ostriches in the plain Lands and *Guianacoes*, which are the Beasts that bear

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the red Wool, whereof Hats are made in *England*. There is much of this Wool in the Kingdom of *Peru* and *Chile*.

My People could not by any Means come to converse with the Natives who are at Wars with the *Spaniards*, and have the Gold, without violating the *Spaniard's* Power; for on the Shore within the Harbour, the *Indians* made a Fire by the Woods Side, and hung out a white Flag on a long Pole, and kept wafting of it a long time. My Lieutenant would have gone in his Boat to them, but the *Spaniards* would not permit him, and said that they were their own People who lived there.

My Seamen, which came aboard in my Boat, came to me, and told me, that the Lieutenant had been at Fort St. *Jago*, and had deliver'd my Message there to the Captain, but he had no Order for my fetching of Water, and that he wished my Lieutenant to go to Fort St. *Peter*; which he did, and a Fryar and two *Spaniards* went over with him in the Boat, the Flag of Truce flying in the Boat, and the Trumpeter sounding, according to my Order, all the time, till they landed at the Fort. At their Landing, the Lieutenant was received very courteously by several *Spanish* Gentlemen, and desired to walk up to the Governour; which my Lieutenant did to a Tent where the Governour was; the Governour received the Lieutenant very kindly, and desired him to sit down. My Lieutenant presented my Respects to the Governour, and delivered to him the Cheese and Butter, together

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ther with the Spice, Glasses and Tobacco-pipes, which I sent to him, and acquainted him, that I sent him, to desire to know if he would be pleased to permit my Boat to water to day, for my Boats lay ready, and had the Cask in them, and I waited his Answer. The Governour caused my Lieutenant and Mr. *Fortescue* to sit down, and drank to them in a Silver Bowl with *Chile* Wine: He gave no Answer to the Lieutenant at present, but sent an Officer and Soldiers and seized on my Boat; My Lieutenant desired to know what the meaning was that Possession was taken of the Boat? The Governour answered, he had Order from *Don Pedro de Montañes*, Captain General of *Chile*, to keep them till the Ship was brought into the Harbour under the Command of the Castle, and he was sorry he had no more Officers of the Ships in Possession.

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A LETTER from Lieutenant *Armiger* to
Captain *Narbrough*.

SIR,

M*Y self and Mr. Fortescue are kept here as Prisoners, but for what cause I cannot tell; but they still pretend much Friendship, and say, that if you will bring the Ship into the Harbour, you shall have all the Accommodation that may be.*

Sir, I need not advise you further.

I am,

Thomas Armiger.

December 18.

1670.

John Fortescue.

I examined my Seamen which came in my Boat from the Lieutenant, and they related to me the whole Matter, and they believed that the *Spaniards* had a design to betray the Ship, but they could not agree among themselves: I talked with the two *Indians* that came aboard, they could speak the *Spanish* Tongue indifferently well; they told me that I was a Friend to the *Indians* of the Mountains, and that I was not a

Spaniard: They would needs know of me where my Country is, and if I would come again? I made them answer, that my Country is a little Way off, on the other Side of the Sea, and that I would come again, and bring Knives, Hatchets, Beads, Glasses, &c. and live in the Country with them, and that they should see my Country; and that my King would give them many Things, and they should live with us; and that my King is the greatest King in the World, and commands all other Kings, and that our Names are *English*; the *Indians* laughed, and seemed to be very glad: I bad them acquaint the *Indians* of the Mountains, or In-lands, that I came to speak with them; and that I was their Friend, and would give them many Hatchets, and Knives, and Swords, &c. if they would come to me, and that I came purposely to speak with them; and that my *Master*, the *Great King* of *England*, hath sent them many Things, and would willingly see them.

After these People had heard all that I said to them, they sat for a time mute, and considering of the Kindnesses they received from me and my Company, and that they must go a-shore again under the Command of the cruel *Spaniards*, they weeped extreamly, and uttered these Words, *Numbra Spanalos mucho Diablo*, &c. In *English* it is, *The Spanish Men are much Devils*, &c. I verily believe that these poor innocent Creatures speak Truth, for they are great Devils in abusing these poor Souls so unmercifully as they do. In sight of my Men, the *Spaniards* with a great Staff would

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would strike an *Indian* on the Head as he talked with him, and beat him all along, for no cause at all; but this they do to shew their Greatness and Imperiousness. The best Name the *Spaniards* can afford to call an *Indian* by, is Dog, and Devil, and such like Names.

These *Indians* say, that there is much Gold in the Land, and that the *Spaniards* have much Oro; I gave to each of these *Indians* a Knife, and a small Looking-glass, and some Beads: They were very thankful, and I put them in mind again to speak to the *Indians* of the In-land, that I would give them Knives and Glasses, if they would come to me. I was in great hopes all this time, that I should have the Opportunity to speak with my Golden Friends, by the means of these People; for they seemed to be glad of the Message, or of the Things which I gave them to do it.

These People are of a middle Stature, strongly set and well-fleshed; they are tawny coloured, and have long black flaggy Hair; their Features tolerable, of a somewhat melancholy Countenance; they are very active in Body, and hardy in enduring of Weather or Diet: They wear small Caps on their Heads like to Mounteers, and their Garment is a long Mantle; but most of their Garments are a square piece of Woollen Cloth, like a Carpet, of their own weaving of the Wool of *Guianacoes*: They cut a hole in the middle of this Carpet, through which they put their Head, and it hangs upon their Shoulders, and covers their whole Bodies like a Cloak,

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Cloak, when it is buttoned down before. Some have these Cloaks so long, as it reacheth down to their middle Leg, and some to the Knee; some wear Half-Stockings on their Legs, but no Shooes nor Shirts: Some have Breeches after the *Spanish* Fashion, but close to their Thighs and Knees.

A NOTE which I sent to Lieut. *Armiger*, enclosed in a Letter.

I Lieutenant, take what notice you can of the Fortification of the Fort, and what Strength they have of People in it, and whether they are able to withstand a Ship; and what quantity of Provisions they have in it; and whether Don Carlos be there; send me an Account thereof by John Wilkins; I will use all Endeavours to have you off, when I understand the Strength of the Place.

I remain your loving Friend,

John Narbrough.

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December 18. 1670. This Evening I took the Sun's Amplitude with my Compass, and I had a good Observation. I find the Variation of the Compass to be eight Degrees ten Minutes Easterly.

I do much reason with myself as to the Variation, that it differs so much in the same Latitude, between the East and West-side of the Land of *America*; for on the East-side, as I sailed in the Latitude of forty Degrees, I found the Compass to have twenty Degrees Variation Easterly, by several good Observations, which I took with the same Instrument as I now do use, which is a large *Azimuth* Compass; and here I find but eight Degrees and ten Minutes Variation; and it is but eight Degrees of Longitude more Westerly in the same Parallel, differing between these Observations, and the difference of Variation.

I find the Land to be but One hundred and twenty five Leagues broad, from the East-side to the West-side, in the Latitude of forty Degrees South of the Equinoctial; certainly the attractive quality of the Magnet must be very powerful in the Eastern Part of the Land, more than in the Western, which causeth the difference; yet I admire, being on both Sides of the Land, the Compass should always have the same Variation Easterly. I was of the Opinion that the Variation would have been Westerly on the West-side, being Easterly on the East-side; but I find the contrary by Experience; therefore I believe that the attractive Quality is not much in this Part of *America*, but in some other Part more
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to the Eastward than I was ; for if the attractive Quality had been in this Land, and I sailing on both Sides of it, the Variation must have been Easterly on the one Side, and Westerly on the other. This Discourse I leave to a better Understanding ; for I am not as yet satisfied what occasioneth the Variation and the great Difference of it, although I have been on several Voyages, and have made great Benefit of the Understanding of the Variation of the Compass, in directing of the true Course, &c.

In the Port of *Baldavia* there are three fair Rivers, which come out of the Country, and empty themselves into the Port with a brisk Stream of fresh Water, which causeth the Stream always to set out of the Harbour, and the Waters to be fresh just within the Harbour's-mouth : One River runs up into the South-East part of the Harbour into the Country ; another River runs into the Country to the Eastward, on the back-side of *St. Peter's* Fort : The third River runs into the Country, about the North-Point of the Harbour's-mouth, between the Point and the North-End of *St. Peter's* Island : It runs up in the North-Eastward, and nine or ten Mills stand upon the River from the Harbour's-mouth. The City of *Baldavia* is situated on the Bank of the River, as the *Spaniards* tell me.

I judge this City of *Baldavia* is but a small Place, and kept only as a Garrison, and a Place for Trade with the *Indians* for Gold, Bezoar Stones, *Guianacoe*-Wool, &c. The *Spaniards* that were aboard, and the *Indians* said, that there

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were but five great Guns in it, and three hundred Men. I know that they speak of the most of every Thing in the Matters, as concerning their Strength, and Number of Men.

I believe that these Rivers may run into the Country a long way, and the *Spaniards* to have but little Knowledge in the inward Parts of this Country; for the *Indians* will not suffer the *Spaniards* to search into the In-lands. I believe also, that these Rivers are not Navigable for Shipping; for the Bark which was there would certainly have gone up the River to the City of *Baldavia*, and delivered her Goods there, and not troubled themselves to carry the Goods up in Boats, and small flat-bottom'd Barges, which they have there for the purpose: The Barges are built much like our West-Country Barges, and smaller by much. These Boats, or Barges, will carry about ten or twelve Tons: They steer with a Rudder, and have one Mast and Sail, as our Barges have; the Sail is made of Cotton-cloth, and the Ropes are made of the Rind of *Mangrove Trees*; and instead of Anchors, they have wooden Crab-claws, or Kellocks. Anchors of Iron and Grapnels are scarce in these Countries: Ropes and Cables of Hemp are also scarce there, and good Fir-masts much wanted in all these Countries for their Ships. The Masts for their Ships are made of white Cedar, and such like Wood; they are very heavy and short-grained, and will break short. There are not any Fir-trees growing in all the Land: Good Workmen, for the building of Ships, are also much wanted here, and Seamen.

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The smaller Boats which they have here are Canoes, being cut out of the Body of a large Tree, and shaped somewhat like a Shallop at the ends: Some are thirty feet long, and built one Streak of Board upon them, to raise them higher on their Sides; they will carry near twenty Men a-piece: Some are rowed with Oars, and some are less, and rowed with Paddles; those which are walt, have a great Beam lashed fast along each Side without Board, which keeps them from over-setting. These Boats are very ill built; for I saw not any one of them fit to row in any Sea-gate, or for any Service, or to carry any Person of Quality in. The *Indians* are the *Spaniards* Slaves to row them to and fro, and to do all manner of Labour; for the *Spaniards* will not lay their Hands to any thing in that nature, accounting it beneath them to foul their Fingers with Work; for they scorn to be Servants one to another, let the one be never so Potent, and the other not worth their Rags which he weareth; yet he scorns to be a Servant to him, and live in *America*.

The Land about the Harbour of *Baldavia* is on a good height, and in Land it riseth in large Hills: It is low by the Water-side, and the Shore is sandy in some Bays, and broken shabby bits of glittering Rocks, like Gold, lie shatter'd along by the Shore-side. All the whole Country is overgrown with green Woods, as what I could see of it, and by the Rivers Sides: There is no travelling in the Woods, they are so thick with Under-brush, old rotten Trees, and Leaves, and such Trash.

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The Harbour is near a Mile and an half broad, and the Guns cannot command from one Side to the other : St. Peter's Fort is near two Miles from the Harbour's-mouth ; any Ship may come in and beat them from their Guns, in St. Jago Fort, and in St. Andrew's Sconce, which are on the South-west-side of the Harbour. After you are in, Saint Peter's Fort can do very little or no hurt at all to your Ship, excepting it be accidental dropping shot. The Spaniards have no Plantation on this South-west Side ; they only keep the Forts for Possession, that no foreign Ship may come and have the Port free to ride in, and trade with the Natives. The Harbour is like a Sound, after one is within the Mouth of it toward the South Part.

Here grow many good Canes on the Shore-side, such as are brought from the *East-Indies*, which are called *Bamboas* ; these are very stiff sticks, firm and heavy ; they grow among the Trees on the Sides of the Woods like Vines, and wind about the Trees : Some are above twenty feet long, and taper from the Root to the Top, like an Angling-Rod.

All Commodities which come from *Europe* are very dear here, and scarce ; for they have none brought to them, but by the way of *Panama*, and the River of *Plata*, which pass through several Merchants Hands before they come into these parts, and the transporting of them from place to place, is very chargeable. Many also are but of little Esteem, here being such plenty of them : French Hollands, Silks, *Flanders* Laces, Silk-sockings, Ribboning, *French* Linnen, Looking-glasses,

glasses, and such like Commodities were much enquired for here, and would have sold at great Rates.

Gun-powder for Fowling-pieces, is worth a Piece of Eight *per* pound; and Bird-shot is worth two Ryals of Plate a pound, and a Ryal and a half a pound. All Commodities of *European* Workmanship are of great worth here, as I understand; and believe, that more Northerly, on the Coast of *Chile*, about *Vale Parazo*, and *Coquimbo* and *Areca*, where there are more Inhabitants, Commodities would bear a much greater Price than what I mention, and there would vent great Quantities; for Silver is more plentiful by much in these Parts than at *Baldavia*, they being nearer the Mines of the *Potossea*; for the Silver of *Potossea* comes down to the Port of *Areca*, and from thence it is carried to *Lima* by Sea.

I am of Opinion, that the most advantageous Trade in the World might be made in these Parts if it were but follow'd, and that leave were granted by the King of *Spain* for the *English* to trade freely in all their Ports and Coasts; for the People which inhabit there are very desirous of Trade; but the Governours durst not permit without Orders, unless such Ships of Force were to go thither, and trade *per* force, and not take notice of the Governours; which might be easily performed by four Ships, of twenty and thirty Pieces of Ordnance a Ship; and I believe that the Natives in the Southern Parts of *Chile*, about *Castro*, and *Orsono*, and at *Baldavia*, would be brought to a rich Trade of Gold, when once the

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grew to be acquainted with those that should be employed on the Design, and they did but use them civilly at the first, and gain their Loves; which may be easily done, by giving them Knives, Scissors, Glasses, Beads, Combs, Hatchets, and the like Commodities, and treat them kindly. For what I understand by the *Indians*, who were aboard of me, they are Masters of the Golden Part of the Country.

My Intent being, if Weather permit me, to sail all along the Coast from *Baldavia* to the Southward, till I come to the Streights-Mouth at *Cape Desiade*, I came in great hopes to meet with the *Indians* in some Part of the Coasts, and to trade with them for Gold, and to find good Harbours. I resolve also to see in at the Islands of *Castro* and *Orsono*, and try what I can find among those *Spaniards* who are settled there, and whether they live accordingly as the *Spaniard* informed me here.

The Names of the four Men of my Company, whom the *Spaniards* detained at *Baldavia*, and whom I left there.

Thomas Arniger Lieutenant, aged forty Years, and born in *Norfolk*.

John Fortescue Gentleman, aged twenty seven Years, and born in *Kent*.

Hugh Cooe Trumpeter, aged twenty eight Years, and born in *Wapping*.

Thomas Highway Linguist, aged thirty five Years, and born in *Barbary* of *Moorish* Parents:

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He turned Christian, and lived in *London*. This *Thomas Highway* is a *Tawny-Moor*; he speaks the *Spanish* Tongue very clear, for he had lived formerly at *Cadiz* with an *English* Merchant.

All these four were very healthy sound Men, and of good Presence and Spirit; which gives me great hopes that they will live to give an Account of that Country, and of their Travels.

Cape Gallery, which is the outermost Point on the South-side of the Harbour of *Baldavia*, lieth in the Latitude of 39 degrees, 57 minutes, South of the Equinoctial; as also in Longitude to the Westward of the Meridian of the *Lizard* of *England*, 70 degrees, 20 minutes, according to my Account; and in Meridian distance One thousand one hundred and eight Leagues West; and in Longitude, East from the West-Mouth of *Magellan* Streights and *Cape-Pillar*, two degrees and 40 minutes; and in Meridian distance 42 Leagues nearest, according to my reckoning.

Thursday, December 22. This Morning it prov'd very fair Weather; at Day-light, the Wind was at South-west, a fresh gale; the Sea indifferent smooth: I plied to the Windward along the Coasts, and was about three Leagues off the Shore, somewhat to the Southward of *Cape-Gallery*, out of sight of the People of *Baldavia*; for the Cape was shut in with the Land to the Northward of the Harbour. At twelve of the Clock I had a good Observation of the Sun with my Quadrant; and I found myself in the Latitude of 40 degrees 3 minutes South: I was then three

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Leagues off the Shore, and could not get ground at 80 Fathom. I was to the Southward of *Baldavia* Harbour.

December 31. This Afternoon it blew hard at *N.W.* and rained; I steered *S.W.* and by *S.* by my Compass, this Afternoon and to Night. Here are several Sorts of Porpus-Fishes in these Seas, unlike ours in *Europe*: Some pied white and black, and some grey and large ones. Rainy Weather to Night, and no Observation to be made of the Shore.

January, Anno Dom. 1670-1.

Sunday, January 1. Raw, cold, cloudy Weather; Rain and some Hail, the Wind at *N.W.* a stout Gale, and a great Sea: I was much afraid that I should lose my Main-mast, it fetched such a Way, and broke the Spikes that fastned the Masts with working. I steered *S. S. W.* to ease the Ship from rolling what I could. After several Courses made from *Saturday* Noon till to Day Noon, I make the true Course to be South 39 *d.* 30 *m.* Westerly, and distance, sailed 105 Miles, and departure West 66 Miles, and difference of Longitude 101 *d.* 37 *m.* 4 tenths; difference of Latitude 1 *d.* 22 *m.* 3 tenths; Latitude, by Account, 47 *d.* 47 *m.* South.

Wednesday, January 4. Indifferent fair Weather, the Wind at North-west, and sometimes at *N.W.* a fine Gale: I kept on my Course South. Some Porpus Fishes seen to day, and some Whales and Sea-Fowl; many little Peterels. This Morning I took the Sun's Amplitude, and I find the Compass to have 10 *d.* 28 *m.* Variation Easterly.

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My Course, made true from *Tuesday* Noon till to Day Noon, is South; distance sailed 84 Miles, and the difference of Latitude is 1 d. 24 m. 8 tent. Lat. by good Observation of the Sun on the Meridian 51 d. 31 m. South. Meridian distance from *Point Gallery*, West 70 leag. 1 m. 5 tent. Longitude at Noon from *Point Gallery*, West 4 d. 48 m. 4 ten. Longitude at Noon from the *Lizard*, West 75 d. 8 m. 4. ten. Meridian distance from the *Lizard*, West 1178 Leagues, 1 Mile, 5 Tenths.

Friday, January 6. Hazy, foggy Weather this Morning, the Wind at *W. S. W.* a stout Gale. I steered in for to make the four Islands, which I called the *Isles of Direction*, or to make *Cape Desfiade*: My Course was *E. N. E.* by my Compass the Nights being but short, and light; for the Moon was at the full, so that I could see at some time a League before us.

At four of the Clock this Morning, it being fair day-light, I caused the Lead to be cast forth but could not get ground at eighty Fathom: reckon myself about ten Leagues from *Cape Desfiade*, and on the Latitude of 52 d. 53 m. South. A little past four of the Clock, it cleared up on the East Horizon; we looked well abroad, and saw the four Isles, called *The Directions*, which lie at the Mouth of the Straights *N. N. W.* from *Cape Desfiade*, distance from thence about 8 Leagues. These Islands made in four *Hommaccoes*, like Hay-cocks, when I saw them; they bear *N.* of me, distant about 4 Leagues; they lie in the Latitude of 52 d. 42 m. and at five of the Clock

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the Islands bore North of me, distant 3 Leagues off; I sounded, but could not get ground at 70 Fathoms: I saw *Cape Desiade*; it cleared up, for the Fog was much on the Hills; the *Cape* was *E. S. E.* of me, distant near eight Leagues; the tops of the ragged Hills, or rocky Spires, were clouded with the flying Fog, so as I could not see the *Cape* sooner; for in clear Weather, the Land at *Cape-Pillar* and *Cape Desiade* may be seen 15 or 16 Leagues, it is so high and ragged.

I steered by *Cape-Pillar E.* and by *S.* the Wind at *W. S. W.* a fresh Gale; a great humming Sea ran here, which came out of the *S. W.* I saw the Sea break upon broken Ground, which lieth at least four Leagues from the Point of *Cape Desiade* West into the Sea, and many Rocks that were sunk, and Prints of Rocks above Water, which the Sea breaketh terribly: These lie off *Cape Desiade* about two Leagues, and a League, and some not half a Mile off, very dangerous.

As I came nearer the Streights-mouth, I raised the Land on the North-side by *Cape Victory*, and the broken Islands within the Streights, which I called *Westminster Isle*, and the *Lodgers Isle*; they make ragged in Hillocks at the first sight. At nine of the Clock *Cape-Pillar* bore South of me, being distant about a Mile and an half from me.

No Tide or Current, as I could perceive, set either in or out of the Streights, so as to prejudice Navigation.

The difference of Longitude, East is 1 d. 39 m. tenths; the Latitude by my Account now, is but

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52 d. 51 m. South; but formerly my Account of the Latitude of this Place, was South 52 d. 58 m.

Meridian distance at 9 of the Clock, from Point Gallery, West 35 leag. 00 mil. 5-10.

Longitude at 9 of the Clock, from Point Gallery, West 2 d. 43 min. 3-10.

Longitude at 9 of the Clock, from the Lizard, West 73 d. 3 m. 3-10.

Meridian distance at 9 of the Clock, from the Lizard, West 1153 leag. 00 mil. 5-10.

I find but very little Tide or Current in this Sea of *Mare del Zur*; for I am but 3 min. of Longitude out of my Account, in sailing between *Cape-Gallery* and *Cape-Pillar*, forwards and backwards.

At any time, if you have a desire to enter the Streights of *Magellan* at the West-mouth, it will be safest in my Opinion, to bear in for the Land, in the Latitude of 52 d. and 50 m. South; and then you will see the four Isles of *Direction*, which lie before the Mouth of the Streights, somewhat toward the North-side: They lie N. N. W. from *Cape-Pillar*, near 8 Leagues distant. These Islands may be known; for there are but four of them, and they be but of an indifferent height, and but small, and bear irregular Rocks, and they be near together: The Eastermost Isle is near a Mile distant from the other three, and it is pecked up like a Sugar-loaf; the Sea breaks much on these Isles with Westerly Winds, &c. *Cape-Pillar* is the steep Point of Rocks on the South-side of the Streights-mouth, at the entering into the Streights; *Cape Desfiade* is the

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Westerly Point, for it falleth off from *Cape-pillar* near *S. W.* and they are distant about 2 Leagues one from another, which is the Face of the Lands between these two Capes; for at the Point of *Cape Desiade*, the Land on the South-side of the Cape trents off to the South-south-Eastward, all high ragged rocky Mountains: What I saw of it, at the pitch of *Cape Desiade*, there lie many shatter'd Rocks which are above water, and shew like the Ruins of old Houses; and there are Ledges of Rocks that are sunk, which lie near 4 Leagues off of the Cape West; the Sea breaks much on them, and they are dangerous; they lie in the Latitude of 53 d. 10 m. South, by my reckoning. I called these Rocks *The Judges*; they are near 10 Leagues distant *S.* and by *W.* from the *Isles of Direction*, so broad is the first opening of the Streights; for when you can but once see the Land, to make it, there is no danger; but a Stranger that should pass out of the South-sea, and had not passed the Streights before, will find it very difficult to pass the Streights from the West to the East; for at the first entring into it out of the South-sea, as we call it, there are many Openings and Sounds on the North-side, which seem fairer for a Passage than the Strait itself doth; therefore it is best to keep the South-side, far aboard all along from *Cape-pillar*, which is the point at the Entrance: The Course will be *E.* and by *S.* for a Mile or two, and then *E. S. E.* and *S. E.* and by *E.* So the Channel lieth to *Cape Quade*.

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The North-side of the Streights from *Cape Victory*, all along to the East-ward to *Cape Fro ward*, is all a ragged, rocky, mountainous, desolate Country; many high rocky Islands, and small Rocks, and sucking Rocks lie on the North-side of the Streights, at coming out of *Mar del Zur*, 15 Leagues in distance into the Streights to the Eastward. There also run great Sounds and Waters into the North-Land, which shew like a Passage more than the Streights doth. There is no Safety for a Ship to keep the North-shore aboard in this Part; for here lie so many Islands and Rocks, so that if the Weather prove foggy and thick, a Man may mistake the right Channel, and steer in among the broken Islands and Rocks, so far as to endanger his Ship, if the Wind be Westerly, and it is for the most part of the Winter there, very thick and foggy.

Here are many Sounds and Coves on the North-side, between *Cape Victory* and *Cape Quad*, but how far they run into the Land, I know not. I wanted a Sloop, or some other small Vessel, to discover those Sounds; and many other Places of the Streights, which I would gladly have seen.

January 6. In *Tuesday-bay* and *Island-bay* there grows thick shrubby Bushes on the low Land, which have many Berries like Hurts growing on them: these Bushes grow in a mossy loam Earth, which lieth 4 or 5 Feet thick on the Rocks; these Bushes will serve for Fuel: There grows a long sedgy Grass very thick; many Geese and Ducks do make their Nests, and breed in it, and other Sea-Fowl; Here are Ducks, white and

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Brant-Geese, grey Gulls, Sea-Mews, Sea-Divers and Penguins on the Water; I could not see any People now, but some have been there; for I saw where they had made Fires, and an Arbour. Here are Muscles and Limpets on the Rocks; but as for other Fishes I saw none. I rowed two Miles up the Sound, and could have gone farther, but it rained so much, and blew so hard, as I durst not be absent from the Ship; the Water is mighty deep in the Sound. At Night I got aboard, my Seamen were joyful to see me; for they were afraid that the Ship would have broke loose in the time of my absence. Much Rain to Night, and Fogs, the Wind at *W. S. W.* a short gale at Night: I rode fast on the smooth Water, having the Point on the *N. W.* of me: Here is a great deal of fresh Water comes running in Streams down the Sides of the bare rocky Mountains into the Salt Water, many Whales spouting to and fro in these Bays and Sounds, and some Seals on the Rocks: This Part is very desolate, and a meer Chaos, &c.

At eight of the Clock this Evening, I anchored before the Place called *Batchelors* River, in nine Fathom Water, clear sandy Ground, two Cables length from the Shore. Here is very good clear Sandy Ground before the River, and good Anchoring in six, or seven, or eight, or nine, or ten, or eleven Fathom: a fine barth of shore, and good Riding with Westerly Winds, and Northerly; the worst Wind is a *S.* Wind, for it blows right on in this Reach; but there cannot go much Sea here; for the Streight in this Reach is but two Leagues broad. This *Batchelors* River is near five

Leagues to the Eastward of *Cape Quade*, and two Leagues to the Eastward of *St. Jerom's Channel*; on the North-side of it, the Tide runs of an indifferent Strength in this Place, both Ebb and Flood; it sets in and out of *St. Jerom's Channel*, rising and falling about eight or nine Feet perpendicular; here is not above ten Foot Water at a High-water, at the going in of *Batchelors River*. This River is a good Harbour for Barks and Sloops, or the like. This River lieth in a Valley, and a fine Grove of green Trees grows on the West Point: At the Entrance here is a very good fresh Water, and a good Place to wood at. The *Indian* People or Natives frequent this Place often; for here are many Arbours, which are their Houses: Calm Weather to Night, and foggy; I rode fast, the Ship being moored.

Sunday, January 8. Calm Weather, and a fine warm Sun-shine: This Morning at Day-light, I went in my Boat with twenty Men into *Batchelors River*, and rowed four Miles up the Creek, or River, which was as far as the Boat could go, the Water being high: The River ends in a small Creek, coming out of a Lake of fresh Water, in a Valley amongst the Hills; we made the Boat fast, and marched all into the Land 5 or 6 Miles, being stop'd from going further, by Hills rising very steep, and Mountains, and impenetrable Woods: We made several Fires, but could not see any sign of them so far in the Land. No Beast or other Creature to be seen; many small Streams of fresh Water come running from the snowy Mountains, with great Falls from the steep Rocks;

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we looked in many Places of the Earth, and in the Streams of Water for Gold, &c. but found none, nor any other Metal or Mineral: Here grow on the Bushes many small red Berries, much like Hurts, very good to eat; the Grass-Land is very loose and boggy: The Rocks are a kind of white Marble; the Trees like those at *Port Famen*; here are small Pepper-trees. To Night I got on Board; calm Weather: I rode fast with the Ship.

Here ends *Sir John Narbrough's* Manuscript Journal, which we shall continue home to *England*, from the *MS. Diary*, taken by *Sir John's* ingenious Lieutenant, *Nathanael Pecket*.

Wednesday, January 11. Fair Weather, Wind variable, from *S. E.* to *S. W.* This Morning we made the best of our way to get into *Port Famen*: Here we had Fishes from the Shore to fill our Main-mast; at 12 a Clock we anchored in nine Fathom Water. This Place afforded what we wanted, as very good large Trees for Fishes; good Water, good wild Fowl, good Fish, like Mullet, and large Smelts. Here we fitted our Ship's Masts, and Rigging, as well as we could; careen'd her, and filled our Casks with good fresh Water, and took as much Wood aboard, as we thought fit.

January 16. Fair Weather, and little Wind, Westerly. This Morning the Lieutenant was ordered to go up with the Boat in *Segars* River, as high as he could with convenience, and to see for *Indians*: He went up about nine Miles, but could not get higher with the Boat, by reason of the Trunk.

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Trunk-timber, and shoaliness in the Water. So I landed, and went up two Miles by Land to see for *Indians*; but I could not see any, nor any thing worth the Observation. How far the River runs up, I know not, for I saw not the end of it: so I returned a-board again.

January 29. Fair Weather, and little Wind at *S. W.* This Morning the Captain went over with the Pinnacle to the South-shore, to see for *Indians*, and if there were an Harbour for Shipping, short of *Port Famen*. This Day came an *Indian* to the Point of *Port Famen*, and made a Fire; and I went a-shore to see what he had; but he had neither Bow, nor Arrow, nor any thing else, to the value of a Farthing: I would have had him come a-board with me, but he would not; as far as I understood by the Signs he made to me, he had been a Slave to some other *Indians*, and had run away from them, and was travelling home.

Tuesday, January 31. Fair Weather, Wind variable. This Evening the Captain came a-board again, having been over on the South-shore, to see for an Harbour, but could find none, nor see any *Indians*.

Saturday, February 4. Fair Weather, Wind at *W.* by *N.* This Morning, at four a Clock, we set Sail for *Port Famen*, and at eleven a Clock we were short of *Freshwater Bay*; and at six a Clock in the Evening, we anchored in twelve Fathom Water, in a fine sandy Bay, about four Leagues to the Northward of *Freshwater Bay*.

February 5. Fair Weather, but very much Wind, at *S. W.* and *W. S. W.* This Morning

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to the Streights of Magellan. 123

the Captain sent me to *Freshwater Bay* to see for *Indians*, but I saw none there; so I returned again aboard.

February 7. Fair Weather, Wind Northerly. This Morning the Captain ordered me to take the Pinnace, and to go along the North-shore, and between *Elizabeth's Island* and the Shore, to see for *Indians*. In the Afternoon, it blew hard Northerly, that we could not row a head; so I put back into a sandy Bay, and went a-shore, and stayed there all Night; and in this Bay we haled the same, and got a great many good and large Smelts; Smelts of 20 Inches long, and eight Inches about.

Wednesday, February 8. Fair Weather, Wind *W. S. W.* This Morning, at four a Clock, I ran down the Streights with the Pinnace, keeping the North-shore a-board, and ran betwixt it and *Elizabeth's Island*, but saw no *Indians*; yet saw several Places, where they had been very lately, and where they had built their Canoas. From *Cape Desiade* to *Elizabeth's Island*, there is Wood and fresh Water plenty; but from *Elizabeth's Island*, to *Cape Virgin-Mary*, Wood and fresh Water is very scarce to come by. This Afternoon at three a Clock, I got a-board again, and at four a Clock we came to an Anchor in eight Fathom Water, black Sand; we rid within a Mile of the North-shore: *St. Georges*, and *St. Bartholomew's Island* were both shut in one, and they bore *S. S. E.* of me; and *Elizabeth's Island* bore *S.* and by *E.* And here we rid with the Ship all Night.

February

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February 9. Fair Weather, Wind Westerly. This Morning the Captain sent me to see for *Indians*, but I could see none; yet I fell with a good Harbour for small Vessels, on the North-side, and at the South-End of a great deep Bay, thwart of *Elizabeth's Island*; the Entrance of this Harbour is not a Bow-shot from Side to Side: I sounded it, and there was 12 Foot Water at a low Water; but within, there was 3 Fathom Water at low Water: From the Entrance of this Harbour, to the Upper-end of it, is about seven Miles. Here is in this Harbour great Store of Geese and Ducks; and a-shore there is great Store of Heath-berries, and Hicts, and small Black-berries, good and well-tasted; but I saw no *Indians*, so I returned a-board again; the Captain went into another Harbour, a Mile to the Southward of the second Narrow on the North-shore, and sounded, and had four Fathom Water in it; it is very broad within, and there is great Store of Sea-Crabs.

Saturday, February 11. Fair Weather, Wind variable. This Day the Captain ordered me to go with the Pinnace, and discover the North-shore, and if I could with convenience discover some Part of the South; and to go to the first Narrow, and there to stay for the Ship; so I went through the second, and landed on the South-side, in a fine sandy Bay, or Cove, expecting to fall with *Indians*, for I saw many Fires up in the Land; I went up about five or six Miles, but could see no *Indians*. Then the Night coming on, I returned again to the Boat, and there we pitched a Tent to lie in, and lay all Night; and at High-water

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we set the same thwart a Pond of Water, and there it stood until low Water; then we haled the Pond all over, and haled a-shore about 700 good and large Fish like Mulletts. This Land is very dry, barren Land, and nothing to be seen in it worth the Observation.

February 12. Fair Weather, Wind Northerly. This Morning I went over to the North-shore, and there I fell with a fine Sandy Bay; I sounded it, and had 6, 7, 8, 9. and 10 Fathom Water above half a Mile from the Shore. This Bay is between the second Narrow and *Cape Gregory*, close under *Cape Gregory*; this Cape is about five or six Miles to the Eastward of the second Narrow: Here I landed, the Winds being Northerly, a fresh Gale, and haled the Boat up dry, and went up into the Country to see for *Indians*, but saw none, and I returned to the Boat again, where we pitched our Tent, and lay all Night.

February 13. Fair Weather, and a fresh Gale of Wind Westerly. This Morning I ran all along the North-shore from *Cape Gregory*, to the first Narrow; and I was no sooner entred into the first Narrow, but I saw three Anchors, which lay up above *High-water Mark*, in a small Sandy Cove; where I landed, and haled up the Boat, and searched about, to see if we could fall with any Guns, or other Trade. One of the Men found an Iron Commander for some Ship's Poop: One of those Anchors were twelve Foot long in the Shank, and the other two were eleven Foot a-piece, and they were all *Spanish* Anchors. The Land here is barren, dry Land, and affords neither Wood, nor
fresh

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fresh Water ; and for the space of five, or six Miles about, the Land is full of Rats ; they have Holes in the Ground like Coney-boroughs ; their Food I suppose to be Limpet, for there is great Store of Limpet-shoals lying close to their Holes : I saw no *Indians* here, nor any thing worth observing. Night coming on, we here pitched our Tent, and lay all Night : Here are very good Sandy Bays on the North-side, all the way betwixt the first and second Narrow ; for I founded all along as I came down in the Boat, and had ten and twelve Fathom Water, a good Burth off.

Tuesday, February 14. Close, hasey Weather, with some Rain, and very much Wind Westerly. This Morning I saw the Ship coming down the Streights ; and after she was through the Narrow, they brought her to, and I got a-board ; and we made all the Sail we could, and by Night we got clear of the Streights into the North-sea ; and at 3 a Clock *Cape Virgin-Mary* bore *N. W.* half a Point Northerly, distance 4 Leagues.

Thursday, February 23. Fair Weather, the Wind variable, from the *N. N. W.* to the *W. N. W.* This Evening, at nine a Clock, we came to an Anchor in 22 Fathom Water, Sandy Ground on the South-part of *America*, in the Latitude of 47 d. 16 m. South ; and then *Cape-Blanco* bore *N. N. W.* of me, distant about 6 Leagues.

February 24. Fair Weather, and little Wind Northerly. This Morning we weighed, to go to *Port Desire-Bay*, and in the Evening at 6 a Clock we anchored in the Bay, in 14 Fathom Water.

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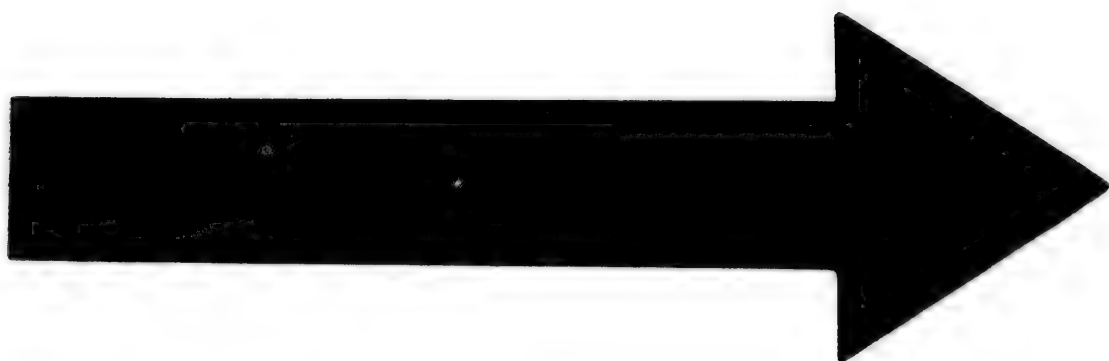
to the Streights of Magellan: 127

February 25. Fair Weather, and a fresh Gale of Wind Easterly. This Day the Long-boat went into *Port Desire* for fresh Water, but could not fill above five or six Puncheons; for there was no more to be had there, and all they brought a-board was brackish: Fair Weather, Wind variable.

Sunday, February 26. Fair Weather, and a fresh Wind at *S. S. W.* This Morning we set Sail from *Port Desire*, to go for *England*; and at twelve a Clock, I was in the Latitude of *47 d. 10 m. S.* And then *Cape Blanco* bore *N. W.* of me, but not by the Compass; for here is a Point and half Variation Easterly; and at four a Clock, *Cape Blanco* bore *W. N. W.* of me, by the Compass, distance nine Miles, and then we had 20 Fathom Water; but when it bears *W. N. W.* from you, and you are 8 Miles off, you will have but ten Fathom Water. Here is very good Sounding all the Coast along, from this Cape to *Cape Virgin-Mary*, which lies in *52 d. 15 m. S.* Within five Leagues off the Main, you will have 25 and 30 Fathom Water; and 10 Leagues off, you will have 50, and 55 Fathom Water, it is black basie Sand.

Wednesday, May 17. The Weather fair. This Evening, at six a Clock, we saw the Island of *St. Mary*, one of the Isles of *Azores*; it bore *E. N. E.* of me, distant about 16 Leagues, by Estimation: Fair Weather, Wind at *S. E.*

May 19. Fair Weather, Wind Easterly. This Morning, at seven a Clock, the Town of *Punteleda*, upon the Island of *St. Michaels*, one of the Isles of *Azores*, bore North of me, distant about



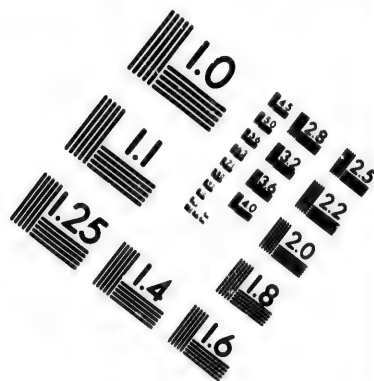
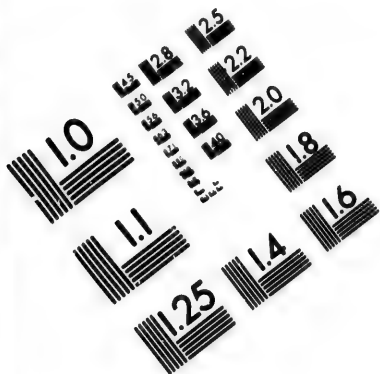
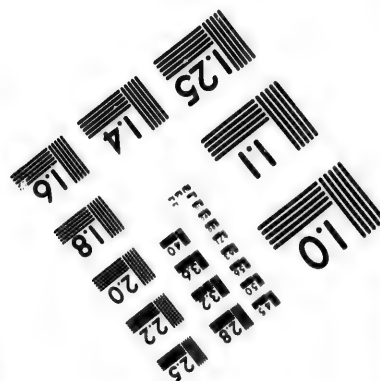
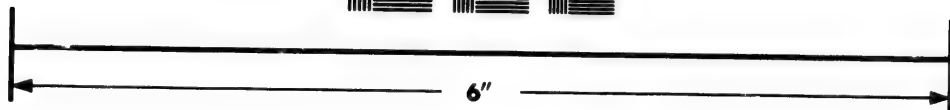
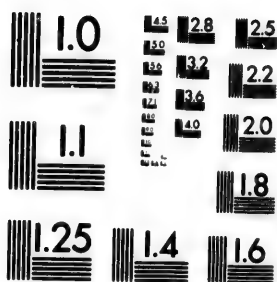


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 Meridian distance from *Cape Blanco* to this Town
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 this Town, lying so far to the Eastward of the
 Cape. This Day the Captain sent me a-shore to
Puntelegada, to enquire News from *England*,
 whether we had War, or Peace with any other
 Nation, or not; and I was informed by Mr. *Richard Neuchefson*, that we had War with none,
 but the *Argea-Men*. So I returned a-board again,
 and we made all the Sail we could for *England*.

Tuesday, May 23. Fair Weather, and much
 Wind at *N. E.* our Provisions being almost done,
 and but little Water in the Ship; we bore up to
 go for *Angria* at the *Terceras*.

May 24. Close, hasey Weather, and a fresh
 Gale of Wind at *N. E.* and by *N.* This Fore-
 noon we anchored in *Angria Rode*, in 16 Fathom
 Water.

Friday, May 26. Fair Weather, and little
 Wind at *N. E.* This Forenoon we set Sail out of
Angria-Rode, to go for *England*.

Saturday, June 10. 1671. It was hasey, dirty
 Weather, Wind at *S. W.* This Morning I saw
Scilly, at seven a Clock; it bore *N. E.* by *N.* of
 me, distant about 5 Leagues; and at six a Clock
 in the Afternoon the *Lizard* bore North of me,
 distant about 3 Leagues. Now, I make my dif-
 ference of Longitude, from *Cape Blancho* to the
Lizzard in *England*, to be 60 d. 45 m. 2-10.
 and my Meridian distance is 840 Leagues; I am
 so far to the Eastward of the Cape.

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A Relation of a Voyage made towards the South Terra Incognita; extracted from the Journal of Captain Abel Jansen Tasman, by which not only a new Passage by Sea to the Southward of Nova Hollandia, Vandenmens Land, &c. is discovered, and a vast space of Land and Sea incompassed and sailed round, but many considerable and instructive Observations concerning the Variation of the Magnetical Needle in Parts of the World almost Antipodes to us; and several other curious Remarks, concerning those Places and People, are set forth. Not long since published in the Low Dutch by Dirk Rembrantse, and now in English from Dr. Hook's Collections.

IN the Year 1642. Aug. 14. He set Sail with two Ships from *Batavia*, to wit, the Yacht *Heemskirk*, and the Fly-boat *Seabaen*; and the 5th. of September came to an Anchor at the Island *Mauritius* 20 d. South Latitude, and 3 d. 48 m. Longit. They found this Island 50 Dutch Miles more Easterly than by their reckoning, which make 3 d. 33 m. of Longitude. The

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8th. of *October* they departed from thence, and went nearly South, till the 40, or 41 d. having *N. W.* var. 23, 24, and 25 d. to the 22d. of *October*. From that time they bore away East, somewhat Southwardly, till the 29th, when they were in South Latitude 45 d. 47 m. Longit. 89 d. 44 m. Var. *N. W.* 26 d. The 6th of *November* they were in South Latitude 49 d. 4 m. Longit. 114 d. 56 m. *N. W.* var. 26 d. with much dirty, misty, windy, and gusty Weather, and with hollow Waves out of the *S. W.* and *S.* so that we could not conceive there could be any Land very near upon these Points. *November* 15. Latitude *S.* 44 d. 3 m. Longitude 140 d. 32 m. *N. W.* var. 18 d. 30 m. which decreased apace, so that on the 21st. being in 158 d. Longit. the Variation was no more than 4 d. The 22d. being the next day, their Compass would not stand still as it ought; therefore they guessed there was here some Mines of Load-stone, for that their Compass stood not still upon any of the eight Points. The 24th of *Nov.* in South Latitude 42 d. 25 m. and their middle Longit. of 163 d. 50 m. they saw Land *E. by N.* distant from them 10 Miles, which they named *Anthony van Diemens Land*. Here the Compass stood right at this Land in the Longitude of 163 d. 50 m. They had much stormy bad Weather, so they went away *S. by E.* along the Coast to 44 d. of South Latitude, where the Land runs away *E.* and afterwards *N. E.* and northerly: Here in the Longitude 167 d. 55 m. and Latitude 43 d. 10 m. they came to anchor in a Bay, which on the 1st

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towards the South Terra Incognita. 131

December they named *Frederick Hendricks Bay* : They heard, as they thought, the noise of Men; but saw none; they saw also two Trees about two, or two and a half Fathom thick, and 60, or 65 Foot high below the Branches; the Bark of these Trees was cut with Flint, peeled off in form of Steps, to help the Inhabitants to climb them, and take the Birds Nests thereon; these Steps were about 5 Foot asunder, so that we must either conclude these People very great, or else that they have some unknown Trick to make use of the said Steps for climbing these Trees. In the one Tree the Steps seemed so fresh and green, as if it had not been four days since they were cut; the noise of Men, and the Play which they heard, was much like that of a *Jews-Trump*, or little *Gom*, which was not far off; but they saw nobody. They saw the footing of wild Beasts, having Claws like a *Tyger*, and of other Beasts: They found also Gum of the Trees, and Gum-Lac of the Ground. The Ebb and Flood was here about three Foot. The Trees stood not thick, nor incumbered with thick Bushes, or Underwood; they saw likewise in several Places the Smoak of Fire. Here they did nothing but only set up a Stake with the Companies Mark, and a Princes Flag thereon; there was here 3 d. N. E. variation. December 5. S. Lat. 41 d. 34 m. Long. 169 d. they went away E. from *Anthony van Diemens Land*, with purpose to run away E. to the Longit. of 195 d. to find the Islands of *Solomon*. December 9. with S. Lat. 42 d. 37 m. Long. 176 d. 29 m. N. E. variation 5 d. Decemb. 12. they

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had hollow Waves out of the *S. W.* therefore from that Quarter no Land is to be expected.

December 13. Latitude *S. 42 d. 10 m.* Longitude *188 d. 28 m. N. E.* var. *7 d. 30 m.* they had Land in sight, which was very high and hilly, and which in the Charts is now called *New Zealand*; they went *N.* Eastwards along the Land as the Chart shewed it, till they anchored in a Bay, in *S.* Latitude *40 d. 50. m.* Longitude *191 d. 41 m. N. E.* variation *9 d.* and that on the 18th of *December 1642.* These Inhabitants were rough of voice, thick and gross made, they came not within a Stones cast on Board of us, and blew several times on an Instrument, which made a noise like a *Moorish* Trumpet; in answer thereto we blew ours. Their Colour was between Brown and Yellow; they had black Hair, bound fast and tight upon the Crown of their Head, in the same manner as the *Japanners* have theirs behind their Head, and near as long and thick of Hair, upon which stood a great thick white Feather; their Clothes were of Mats, others of Cotton, but their Upper-parts were naked.

December 19. These Antipodes began to be somewhat bolder, and more free; so that they endeavoured to begin a Truck or Merchandize with the Yacht, and began to come on Board; the Commander seeing this began to fear, lest they might be fallen upon, and sent his Boat or Prow with seven Men to advertise them, that they should not trust these People too much; they went off from the Ship, and not having any Arms with them, were set upon by these Inhabitants, and

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towards the South Terra Incognita. 133

three or four of them were killed, and the rest saved themselves by swimming: This they endeavoured to revenge, but the Water going high, they were hindred; this Bay was by them, for this reason, named *Murdevers Bay*, as it is marked in the Charts. From this Bay they went on E. and found the Land all round about them: It seems a very good Land, fruitful, and well situated, but by reason of the bad Weather, and West Wind, they had a great deal of Trouble to get out. The 24th of *December*, because the Wind would not well suffer them to go to the Northward, they not knowing if they should find any Passage to the North, and the Flood coming out of the S. E. they concluded to go back again into the Bay, and there seek a Passage; but the 26th the Wind better serving, they went away Northerly somewhat to the West. *January* 4. 1643. in S. Latitude 34 d. 35 m. Longit. 191 d. 9 m. N. E. variation 8 d. 40 m. they came to the N. W. Cape of this Land, and had hollow Waves out of the N. E. and therefore doubted not there must be a great Sea in the N. E. whereupon they were glad, as having now gotten a Passage. Here lay an Island which they named *three Kings Island*, to which they went to refresh themselves, and being come near, they saw upon the Hill thirty or thirty five Men, being of tall Stature (as well as might be discerned from far) with Sticks or Clubs, who called to them with harsh or loud Voices, but they could not understand them; and those Men, when they walked, made very wide Paces or Steps. In turning about this

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Island there appeared very few Men, and they saw little or no cultivated Land, but only found a fresh River, where our People intended to get fresh Water, but by some unlucky Accident were prevented; whereupon it was resolved to go with an Eastern Course to the Longitude of 220 d. and then Northward to the South Lat. of 17 d. and from thence Westward to the *Cocos* and *Horns Islands*, first discovered by *William Scutten*; and then, if not sooner, to recruit; for they had indeed been upon *Anthony van Diemens Land*, but had met with nothing; and upon *New Zealand* they had not so much as once been a-shore.

Jan. 8. In S. Latitude 30 d. 25 m. Longitude 192 d. 20 m. N. E. variation 9 d. they had great Waves out of the S. E. so that upon that Point no Land can be hoped. *January 12.* South Latitude 30 d. 5 m. Longitude 195 d. 27 m. N. E. variation 9 1-2 d. they had hollow Waves out of the S. E. and S. W. *January 16.* in S. Latitude 26 d. 29 m. Longitude 199 d. 32 m. N. E. variation 8 d.

The 19. In S. Latitude 22 d. 35 m. Longitude 204 d. 15 m. N. E. variation 7 1-2 d. they saw an Island about two or three Miles round, high, steep, and barren in appearance; they would willingly have come nearer to it, but could not, because of the S. E. and S. S. E. Wind; they gave it the name of *Piilstreets Islands*, because of the multitude of those Fowls; the next day they saw again two Islands. The 21st of *January* in S. Lat. 21 d. 20 m. Longitude 205 d. 29 m. N. E. variation 7 1-4 d. they came to the North

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thermost Island, which was the biggest, and not high; they gave it the Name of *Amsterdam*, and the other *Middleburgh*. On this *Amsterdam* they got many Hogs, Hens, and all sorts of Fruits; the Inhabitants were friendly, had no Weapons, and appeared to know no Evil, excepting that they take the Liberty to steal; there the Current is not great, the Ebb runs near N. E. and the Flood S. W. A S. W. Moon makes high Water, and it flows 7 or 8 Foot at least; the Wind is continually S. E. and S. S. E. wherewith the Yacht *Hemskirk* was adrift, but saved herself off the Island, yet took in no Water, which here was not easie to come by. *January* 25. in S. Lat. 20 d. 15 m. Longitude 206 d. 19 m. N. E. var. 6 1-3 d. After having seen several little Islands, they came to the Island *Rotterdam*, as you see it in the Chart. The People were friendly, and without Arms as the former, but likewise very theevish: Here they got fresh Water, and other Refreshment; they went through this Island, and found the Cocos, or Clappus Trees in great plenty, planted orderly one by another, and Gardens whose Beds were made square, and very handsome, and set with all sorts of Fruit Trees, which in almost all Places were planted in a right Line; so that it was a pleasure to behold them, on all sides giving a fragrant and delightful Smell. From this Island *Rotterdam* they departed, and saw some other Islands which you see in the Chart, and now designed, according to their former Resolution, to go away North till the 17th d. of S. Lat. and then W. not to pass by the

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Traitors and Hornese Island; they had the Wind at S. E. and E. S. E.

February 6. In South Latitude 17 d. 29 m. Longitude 201 d. 35 m. they were intricated among about 18 or 20 Islands, which were all encompassed with Sands, Shoals, Banks and Rocks, which Islands are marked in the Charts by the Name of *Prince Williams Islands*, and *Hemskirks Shoals*.

February 8. In S. Latitude 15 d. 29 m. Longitude 199 d. 31 m. they had a great deal of Rain, and hard Wind out of the N. E. and N. N. E. with hasey and dark Weather, and fearing lest they might be more Westwardly than by their Reckoning, that they might not fall to the Southwards of *Nova Guinea*, or on unknown Coasts; also by reason of the windy dark Weather, they concluded to go on N. or N. N. W. to 4, 5, or 6 d. of S. Latitude, and then away W. to *Nova Guinea*, and so to be in less danger.

February 14. In South Latitude 16 d. 30 m. Longitude 193 d. 35 m. till this time they had every day Rain with Storms, but now 'twas more Calm; they haled the Ship *Seabaen*, and found their Reckonings to agree.

Feb. 20. In S. Lat. 13 d. 45 m. Long. 193 d. 35 m. they had still thick, dark, misty and rainy Weather, the Sea coming out of all Quarters, and the Wind variable. *Feb. 26.* Lat. S. 9 d. 48 m. Long. 193 d. 43 m. the Wind was constantly N. W. They had not had one dry day in twenty one. *March 2.* Lat. S. 9 d. 11 m. Longit. 192 d. 46 m. N. E. var. 10 d. the Weather and Wind

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variable. March 8. Latitude South 7 d. 46 m. Longitude 190 d. 47 m. Weather and Wind as before. March 14. South Latitude 10 d. 12 m. Longitude 186 d. 14 m. N.E. variation 8 d. 45 m. Before this, for twelve days time, they could get no Observation, because every day it was thick, dark, and dirty Weather, with much Rain. March 20. South Latitude 5 d. 15 m. Longitude 181 d. 16 m. N. E. variation 9 d. the Weather grew better. March 22. South Latitude 5 d. 2 m. Longitude 178 d. 32 m. Good Weather with Easterly Trade Wind; they got sight of Land four Miles *W.* from them: It was a number of small Islands, about twenty in all, named in the Charts *Onthong Java*, which lye about ninety Miles from the Coast of *Nova Guinea*. March 25. S. Latitude 4 d. 35 m. Longitude 175 d. 10 m. variation 9 d. 30 m. they were up with the Islands of *Mark*, all found by *William Scouter* and *John le Mair*, being fourteen or fifteen in number: The Natives are Savage, and have their black Hair tyed up like the Rogues of *Murderers Bay* in *Nova Zealandia*. March 29, they passed by *Green Island*; the 30th by *St. Johns Island*. April 1. in South Latitude 4 d. 30 m. Longitude 171 d. 2 m. variation 8 d. 45 m. they reached the Coast of *New Guinea* at a Cape, called by the *Spaniards Cabo St. Maria*, and went along the Coast, which lies about *N. W.* to *Anthony Caens Island*, *Gardeners Island* and *Fishers Island*, to the Promontory, called *Struis Hook*, where the Land falls away *S.* and *S.* Eastwardly which they followed, and went Southerly, until they should disco-

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discover the Land, or else find a Passage to the South. April 12, S. Latitude 3 d. 45 m. Longitude 167 d. 00 m. N. E. variation 10 d. Here they had a sudden Earthquake, that all they that were fast asleep came up out of their Cabbins, very much affrighted, imagining that the Ship had struck upon a Rock, but casting the Lead, found no Ground; they had afterwards several Shakes of the Earthquake, but never so violent as the first; they were then within the *Struis Hook*, standing into the *Bight Bay of Good Hope*. April 14. South Latitude 5 d. 27 m. Here they saw the Land from the E. N. E. into the S. and so on to the S. S. W. they intended to find a Passage between both, but found this to be all one Land even into the West, wherefore they turned their Course Westward along the Coast, and had much Calms. April 20. in S. Lat. 5 d. 4 m. Longitude 164 d. 27 m. N. E. var. 8 d. 30 m. By Night they came by the *Burning Island*, and saw a great Fire come out of the top of the Hill; of which also *William Scouten* writes: They went between this Island and the Main, and saw many Fires close by the Water, as towards the middle of the high Hill; whence they argued this to be a populous and well inhabited Island; they had along this Coast of *Nova Guinea* much Calms, and saw frequently drift Wood, as small Trees, Bamboes, and other filth, from the Land that came out from the Rivers, which made them conclude that there are many Rivers, and that it must be a good Land

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The next day they pass'd the *Burning Mountain*, and went along the Shore *W. N. W.* April 27. in South Latitude 2 d. 10 m. Longitude 156 d. 47 m. they thought they were at the Island *Moa*, but it was *Jama*, a little more Easterly than *Moa*; here they got many *Coco-Nuts* and other things: The People were wholly black, and what they heard our People speak they could very perfectly repeat, which is a certain Sign that their Language is very copious in Words, and difficult to be pronounc'd, because they use much the Letter *R.* and sometimes two or three times in a Word. The next day they came before *Moa*, where likewise they got much Refreshment; here, by reason of contrary Winds, they stay'd till the 6th of *May*, so that they truck'd for near 6000 *Coco-Nuts*, and 100 Bundles of *Pysanghs*; about the Beginning of their Traffick on the Island *Moa*, whether maliciously or otherwise, one of our Company was hurt with an Arrow shot by one of the Inhabitants: Whilst this pass'd they were getting their Ships nearer to the Land, wherewith this People were so frightened, that of their own accord they brought aboard him that had shot the Arrow, for us to do with him what we pleased, and from that time they were better to be spoken withal, whether it were in their Traffick or otherwise, so that our People took Pieces of Iron Hoops and fitted them into Hafts, and made them somewhat bright and sharp, and so put them off for Knives. It is probable they still remember what befel them with *William Scouten* 27 Years before: 'Twas in the Year

140 *A Voyage made by Captain Tasman, &c.*
Year 1616, July 16. for they having dealt very
traiterously and perversly with him; *Jacob le*
Mair went with the Ship close to the Land be-
tween the Islands, and shot with his Great Guns
along the Strand, and into the Woods, so that
the Bullets flew through the Trees with a great
Noise, whereupon these Negroes fled, and durst
not once peep out; but at length they grew very
tractable. May 12. in S. Lat. 0 d. 54 m. and
Long. 153 d. 17 m. N. E. Variation 6 d. 30 m.
they sail'd along the N. side of *William Scouten's*
Island; it seems that the People are nimble, and
that the Island is well inhabited, and is about 18
or 19 Miles long. May 18. S. Lat. 0 d. 26 m.
Long. 147 d. 55 m. N. E. Variation 5 d. 30 m.
they had pass'd the *Cape of Good Hope* and come
to the West end of *New-Guinea*, a broken Point
of Land. They had much variable Calm and con-
trary Winds with Rain; From hence they went
Southward for *Seram*, and came on the North
side thereof. On the 27th of May they went on
through the Streights to the North of *Boure* or
Bouton, and so for *Batavia* where they arriv'd
June 15, in South Latitude 6 d. 12 m. and Lon-
gitude 127 d. 18 m. the Voyage was finish'd in
ten Months.

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A Relation of a Voyage for the Discovery of a Passage by the North-East, to Japan and China; Perform'd in his Majesty's Ship the Speedwel, and Prosperous Pink, Anno Domini 1676. Where is shew'd the Reasons and Grounds of the Probability of a Passage before the Attempt, with some good Observations made in the said Voyage, by Captain John Wood.

TO write a full Relation of all those Navigators that have attempted to find a Passage by the N. E. to China and Japan, will be needless, since their Narratives have pass'd most Hands, they being recorded in *Hackluit* and *Purchase*; but my Intent is, to shew wherein those fail'd that have formerly undertaken it, and then to shew the probable Reasons that induc'd me to undertake the said Voyage, with the Event thereof.

The first that ever attempted the said Voyage, was Sir *Hugh Willoughby* in the Year 1553, with three Sail of Ships, and he sail'd to the North Cape of *Finnmarke*, and then into the Lat. of 72, where he says he saw Land; but to this day it cannot be found again, and I am of Opinion that it was some Fog Bank that he saw; for in
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my Return home, I ran over the same place where our Chart-makers lay down that Land; but certain it was, that by foul Weather he was forc'd into a Harbour in *Lapland*, call'd *Arzena*, where, by the Continuance of bad Weather, he could never return out, but was there frozen to Death with all his Ship's Company; so that of this Voyage there was no Light given to find a Passage that way.

The second that attempted, was one Captain *Stephen Burroughs*, afterward Comptroller of the Navy to Queen *Elizabeth*. In the Year 1556, he set forward, and pass'd the North Cape, and sailing farther Easterly, discover'd the Waygates, that is the Streight that runneth between the South Part of *Norva Zembla*, and the *Sammoyds* Country, where he enter'd, and believing that *Sinus*, or Bay, the Eastward of the Streights, to be a free and open Sea, he return'd with Hope of Passage that way to *China* and *Japan*.

The third that attempted, was Captain *Arthur Pett*, and Captain *Charles Jackman*, in the Year 1580, being sent out by Queen *Elizabeth* to follow the Track of *Burroughs*; so, setting forwards they came to the Waygates, and passed the Streights, and came into the Sea to the Eastward, where they met with such a vast Quantity of Ice and bad Weather, that they with great Hazard, Peril, and Labour, were forc'd to return, but by foul Weather lost one the other, and *Pett* was never heard of since; so the Passage through the Waygate was in *England* laid by, as thought not possible that way, and then the *Hollanders* undertook

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The fourth that attempted it was *William Barrans*, a well Experienced Navigator and Artist, sent out of *Holland* by Prince *Maurice* in the Year 1606. He sailed into the Waygates, but being entred, he found the same Incumbrance with Ice that *Pett* and *Jackman* had done before; so tasting of the Water, and finding of it fresh, which neither *Burroughs*, *Pett*, nor *Jackman*, had observed; he returned without any hope or probability of a Passage that way; but this not discouraging him, he resolved a second Adventure to the Northward of *Nova Zembla*, to see what might be performed that way.

So in the Year 1607, he set forward, and arrived on the Coast of *Nova Zembla*, in the Lat. of 73, where he met with Ice; and so coasted the Shore till he came to the Lat. of 76, where he could get no farther, and by the Ice was there driven on Shore, and his Ship broke in pieces by it, and he confined to winter there, where they all endured the greatest Extremity of Cold that ever Mortals did; the Winter being past, they with difficulty, in two Boats, got to *Cola* in *Lapland*; but before their Arrival there, *William Barrans* dyed, to the great grief of all his Company.

The next that attempted it, was that famous Discoverer of our own Nation Mr. *Henry Hudson*, in the Year 1610. but he being disheartned by the Voyage of *Barrans*, attempted but little.

So the Thought of a Passage by the North-East was wholly laid aside, till of late within this Year or two some Novel Accidents happening, the

the Opinion of the North-East was received in some, and something relating thereunto was printed in the *Transactions* of the *Royal Society*.

Now will I come to the Reasons that induced me to believe there was a Probability of a Passage, and then the cause of my undertaking of the said Voyage.

My first Reason was grounded on the Opinion of *William Barrans* before spoke of; which was, that *Nova Zembla* and *Greenland* being 200 Leagues distance between one and the other, that if he had steered away North-East from the North Cape, which would have brought him in the mid-way betwixt the two Lands, that then he might have probably found an open Sea, free from Ice, and so consequently a Passage; and in that Opinion he remained to his dying day; for he did verily believe that the Ice was not to be met off of either Shore more than 20 Leagues, and the rest to be free and open, and that his being too near the Shore of *Nova Zembla*, was the cause of his meeting so much Ice, which was the Overthrow of his Voyage; and if he had lived, he had purposely intended another Voyage, and to have failed the mid-way.

The second Reason that made me believe a Passage, was a Letter sent out of *Holland*; which is published in the *Transactions* of the *Royal Society*, which affirmeth, the Grand Czar of *Muscovia* had caused a particular Survey of the Land of *Nova Zembla*, and that they had found it to be no Island, but to join to the main Land of *Tartaria*, and that to the Northward of it was a free and open Sea.

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The third, was a Journal printed in *Holland*, of a Voyage from *Batavia* to *Japan*, wherein the Ship was cast away upon *Corea*, a Peninsula of *China*, where by the Natives they were made Slaves. The Relater having been there 16 Years; at last escap'd to *Japan*; and writ this Journal, wherein, amongst other Observations, he relates this; That in a Bay on the Coast of *Corea*, there doth at several Times drive in dead Whales with *English* and *Dutch* Harping Irons in them; which, if true, had been a great Argument of a Passage.

The fourth, was a Relation of Mr. *Joseph Moxons*, who being in *Holland* above 20 Years since, heard a *Dutchman* relate (as he did believe the real Matter of Fact) that he had been under the Pole itself; and that it was as warm there as it was at *Amsterdam* in Summer time.

The fifth, was a Relation of one Captain *Goulden* who had made above thirty Voyages to *Greenland*, and this he did relate to his Majesty; that being at *Greenland* some twenty Years ago; he was in Company with two *Hollanders* to the Eastward of *Edges* Island, and that the Whales not appearing on the Shore; the two *Hollanders* were resolv'd to go farther Northerly, and to push among the Ice; so they departed from him and went to the Northward, and in a Fortnight's time return'd to him again, and gave it out, that they had sail'd into the Lat. of 80, that was within one Degree of the Pole, and that they did meet with no Ice, but a free and open Sea, and that there ran a very hollow grown Sea

like that of the Bay of *Biscay*. Mr. *Goulden* being not satisfy'd with the bare Relation, they produc'd him four Journals out of the two Ships, which testify'd the same, and that they all agreed within 4 *min.* one of the other.

The sixth Inducement that made me believe there was a Passage, was a Relation from the same Captain *Goulden*, which was, That all the Drift-Wood that they found at *Greenland*, was eaten with a Sea-Worm to the very Heart, which, if so, it must of Necessity come out of a hot Climate; for, Experience sheweth, that the Worm biteth in no cold Country, therefore it could not be suppos'd that it came from any other Country than *Jadzo*, *Japan*, or some Land thereabout.

The seventh Argument was another Narration printed in the *Transactions* of two Ships, of late that had attempted the Passage, sail'd 30 Leagues to the Eastward of *Nova Zembla*, and had after prosecuted the Voyage, had there no Difference arose betwixt the Undertakers and the *East-India* Company, against whose Interest it was to suffer it to be found out; so they being a Body, and more powerful than the other suppress'd it.

These seven were the main Arguments, though had many more, that converted me into the Opinion of there being a Possibility of a Passage to the Northward of *Nova Zembla*, to *China* and *Japan*; these being, as I suppos'd, or as any Man would have done, if he had well consider'd the matter to be Matter of Fact, and no Fables.

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Besides these Arguments, I had some grounded upon Reason and Nature, which seem'd to be assistant in the Design of the Attempt, supposing the aforesaid Arguments to be true, and there being no Land nor Ice in the way as an Obstacle to hinder it.

The first was, That being near the North-Pole in the Summer time, it might be as warm as under the *Artick* or *Antartick* Circle, or warmer than with us in the Winter time; for under the Pole itself, in *June*, the Sun being 23 Degrees high, and having no Depression towards the Horizon, but always swimming about at the same Height, might illuminate that Part of the Hemisphere with more Heat than it does ours in Winter, when he is no more than 15 Degrees high, when he is at the highest, that is on the Meridian, and not more than eight Hours above the Horizon; or that it might be as hot as any Place near either Polar Circle, because there the Sun hath a Declination towards the Horizon; and so the Atmosphere hath almost as much time to cool, as it hath to heat, which, under the Pole, should have no Intermision. And one Argument to favour this Opinion, was the Relation of most *Greenland* Traders, who affirm, That the farther North they go on the Coast of that Land, they meet with more green Herbs and Grass, than they do to the Southward, and consequently more Deer.

The second was (that which I most fear'd) which was foggy Weather, which I did imagine, it should happen, it could not at the same

time blow hard ; because it is usual in all other Climates, when Wind happeneth, to disperse the Fog ; so that if it should so happen, one might lie by, or make little way till Wind came, that one might see before them.

The third was the Solution of a Doubt, that most Men had fancy'd, which was, That if one came near the Pole, the Septentrional Declination of the Needle of the Compass should be quite taken away, which would of necessity follow, if the Pole of the World, and the Pole of the Magnet were all one, which, I am certain, is not, but is plac'd so far off, that one might go under the Pole of the World, if Land or Ice did not hinder ; with this Supposition, that one must know where the Pole Magnetical is, to allow the Variation that will there happen.

Having consider'd all these Arguments and Reasons, with many more I met with, which will be too tedious to relate, and the Possibility of a Passage being now imprinted in my Mind and Inclination, I do intend to shew the Reasons, in short, that induc'd me to undertake the said Voyage.

The first was, That the King, whom God preserve, should reap the Honour and Glory thereof, and his Subjects the Profit.

Secondly, There being no Actions within the Hemisphere of his Majesty's Dominions wherein any Vacancy was, but all being supply'd, I chose rather than to be idle, to apply myself to His Majesty for the Prosecution of the Design ; and being advis'd to it by a great many of the best

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Merchants of the City of *London*; where, after divers Consultations with them, and the Reasons and Arguments before-mention'd being debated, it was by many thought Practicable, and by more thought Profitable to the Nation: The Particulars to relate, would swell into a considerable Volume.

The third Reason was peculiar to myself, tho' when known, to the Use and Benefit of all Mankind; which was, That having for some Years past fram'd an Hypothesis of the Motion of the two Magnetical Poles, for two such there be; and by the Observations of all, or most that writ of that Subject, with my own Observation, and costly Experiment upon a great many Places of the Superficies of the Terrestrial Globe; I having found out their Motion very near, and thereby the Inclination of the Magnetical Needle under the Horizon, in all Latitudes, and all Longitudes; and Variation of the Compass may be found in any Place in the World, without Assistance of any other Luminary. But not being so fully satisfy'd as I might be, if I could come so near the Pole as was suppos'd, it prompted my Inclination, as far as any other Argument whatever, to attempt this Voyage.

So, having all these Reasons that there was a Passage, and Reasons for me to undertake it, I advanc'd. The first Step to it was, I drew a Polar Draught, wherein I trac'd all those Navigators that had attempted the North-east, which I presented to his Majesty, and Royal Highness, and apply'd myself to them with the Reasons afore-

said; which, after their Royal Consideration, and Consult with many Merchants and Seamen that had used to sail Northward, and if thought by all feazible, His Majesty was graciously pleas'd to grant me the *Speedwel* Fregat, to be manned and victualled at his Royal Charge, with all other Appurtenances thereunto belonging.

But because in all Attempts of this Nature it was not convenient to venture one Ship alone, for the many Accidents that are incident to a single Ship in an Enterprize of this Nature;

Therefore, his Royal Highness the Duke of York.

The Honourable *John* Lord *Barklet*,

Sir *Joseph Williamson*.

Sir *John Bankes*.

Mr. *Samuel Peeps*.

Captain *Herbert*.

Mr. *Duvey*.

Mr. *Hoopgood*.

These Eight Honourable Persons, at their own proper Charge, bought a Pink, call'd the *Pro-sperous*, of the Burden of a hundred and twenty Tuns, fitted her to Sea, Men, Ammunition, Provision, and Merchandize, which was such as was reasonably propos'd to vend on the Coast of *Tartaria*, or at *Japan*, if a Passage had been found.

Now the Ships being fitted out, the *Speedwel* at *Deptford* in the King's Yard, where the Builder

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Mr. John Sish, took no ordinary Care in Strengthening her, and in her Sheathing, which was as well perform'd as in any Ship that ever sail'd on the Sea. Thus being fitted, I was to satisfie most People of the Advantage to our Nation, that would accrue if there was a Passage.

The first Advantage that I purpos'd, was, that on the Coast of *Tartaria*, it being a cold Climate, we might vend our *English* Cloth, which now is grown a Drug; and certain it is, that they wear Cloth which is sent them from *Russia* and *Moscovia*, which, before it arrive at their Hands, must needs be very dear in the Prize; so if one could come on their Coast, one might vend a great deal more, and abundance cheaper.

The second Advantage, as would have been, that in six Weeks one might have sail'd to *Japan*, which in the other Way is nine Months; and the Passage that Way being as hazardous and perillous as this would have been, if there had been any Passage by the North-East; for by the South way, all the way betwixt *Bantam* and *Japan* are an innumerable Company of Sands, Shoals, and Islands, where many Ships are yearly lost, and all that way one must turn up to the Windward, be in perpetual Fear of the *Hollanders*, whom if we meet, they do their utmost Endeavours to destroy us.

Then if there had been a North-East Passage, and that one might sail in such a short time to *Japan*, the King might send out Men of War to *Japan*, and force them to trade; which the other Way is not to be done, because they cannot carry

Provision for so long time; besides the certain Diseases that are incident to Ships, that have many Men in hot Weather, renders it impracticable: These and many other Reasons I used, which would be too tedious to relate, they being as yet fresh in the Memory of most I told them to.

Now, after all these Arguments and Reasons, the Time of the Year growing on for us to be gone, we made our Ships ready for the Sea, being as well fitted for a Discovery as ever any Ships were; having on board each Ship sixteen Months Provision of all sorts, with Sixty eight Men and Boys in the *Speedwel*, and eighteen Men in the *Prosperous*.

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Journal

Journal, In His Majesty's Ship the Speedwell, Captain John Wood Commander, bound for the Discovery of a Passage to the East-Indies, by the North-East: Sailing about Nova Zembla, and Tartary, and Japan. 1676.

Sunday, May 28. the Wind at *S. W.* Sailed from the *Buoy* of the *Nore*, in Company of the *Prosperous*, Captain *Flawes* Commander, being bound upon the Discovery with us.

At Eight at Night the *Naze Land* bore West 1-2 North about six Leagues, we steered away N. E. and N. N. E.

Monday, May 29. The Wind at *S. W.* and *W. S. W.* a fresh Gale with Showers of Rain, Course *per* Compass between the N. E. and the N. distance sailed by the Log 73 Miles, true Course protracted since last Night Eight a Clock to this Day Noon, is North 28 *d.* East difference of Lat. 68 Miles, and departure East from the *Naze Land* 36 Miles; Lat. by Judgment, as in the Margent. Thick cloudy Weather.

Tuesday, May 30. From Yesterday Noon to this Day Noon, the Wind variable from *S. W.* to the *S. E.* thick cloudy Weather, and a fresh Gale. Course *per* Compass N. N. W. and N. W. N. distance sailed by the Log 95 Miles, true Course is N. 28 *d.* West, distance of Lat. 83 Miles,

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Miles, departure West 45 Miles, Lat. *per* Judgment; Meridian distance West nine Miles.

Wednesday, May 31. From Yesterday Noon to this Day Noon, the Winds variable with Calms and Rains. Courses *per* Traverse; true Course protracted, with all Impediments allowed, is North 43 *d.* West 60 Miles, difference of Lat. 42 Miles, departure West 40 Miles, Lat. *per* Judgment 54 *d.* 13 *m.* Lat. by a good Observation at Noon 55 *d.* 30 *m.* at which time, the Land between *New-Castle* and *Berwick* bore *W.* about 8 or 9 Leagues: Meridian distance Current from the bearing of the Land, and the Lat. is 88 Miles, 50 Fathom Water; saw two Ships standing to the Southward, but would not show their Colours.

Thursday, June 1. From Yesterday Noon to this Day Noon, a fresh Gale from the *W.* by *S.* to the *S. W.* Course *per* Compass between the *N.* and the *N. W.* distance sailed by the Log 76 Miles, true Course protracted is *N.* 16 *d.* West Lat. by a good Observation 56 *d.* 41 *m.* departure West 21 Miles.

At nine in the Morning we gave Chase to a *Scotch* Fisherman, and at Noon came up with her, and bought some Fish of him; at Noon a hard Gale steered away North, being about seven or eight Leagues from the Land, between *Montross* and *Edenburgh*: We steered along the Course *N.* by *E.* till eight a Clock.

Friday, June 2. From Yesterday Noon to this Day Noon, the Winds variable with fair Weather. Course *per* Compass *N.* distance sailed by the

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At two a Clock a great gust of Wind at *N. W.* with Rain; we hand our Top-sails, and at three it blew a Storm of Wind; we lay a Try under a Main-sail till ten a Clock, then sent our Fore-sail.

Saturday, June 3. From Yesterday Noon to this Day Noon, true Course protracted Leeward way, and all Impediments allowed, is North 1-2 East 42 Miles, Lat. by a good Observation is 59 d. 23 m. Meridian distance from the *Naze* Land is 100 Miles; at Noon saw a small Island, called *Foril*, lying to the South of *Shetland*, bearing *W. N. W.* about four Leagues; in the Afternoon little Wind.

Note, that we found the Ship more to the Westward than expected, being caused by a variation of 6 or 7 d. E.

Sunday, June 4. This Forenoon little Wind, with Calms till about 12 at Noon, at which time sprung up a Gale *W. N. W.* blowing very hard, we ply to Windward, and turned into *Brace-Sound*, and anchored in nine Fathom Water, right against the Town called *Lerwick*; here is the Remains of a Fort that was built in the time of War with *Holland*, but upon the Peace with the *Hollanders* it was demolished, for fear any other Nation might come and take it, and so keep it.

Saturday, June 10. Rid still till *Saturday* seven a Clock, at which time weighed, the Wind *S. W.*

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we took in a Pilot, and sailed out through the North End of *Brace Sound*, having three Fathom Water over the shallowest Place.

Sunday, June 11. At four in the Morning *Scarbore W.* by *N.* about six Leagues; a fresh Gale at *S. W.* hasey Weather.

From four in the Morning till twelve at Night Course *N. N. E.* distance sailed by the Log 35 Miles: True Course allowed from the bearing of the Land is *N. E.* 41 Miles, difference of Lat. 30 Miles, Lat. by Judgment 61 *d.* 26 *m.* Meridian distance from *Shetland* 30 Miles East.

From Yesterday Noon to this Day Noon, a strong Gale at *S. W.* West *S. W.* West and *W. N. W.* Course per Compass *N. N. E.* distance sailed by the Log. 147 Miles, difference of Lat. 135 Miles, departure East 56 Miles, Lat. by Judgment 63 *d.* 42 *m.* Meridian distance, *E.* 86 Miles; thick cloudy Weather, at Noon little Wind.

Tuesday, June 13. From Yesterday Noon to this Day little Wind, and variable, with Calms from the *N. W.* to *N. N. E.* we ply to Windward. True Course protracted, all Impediments allowed, is *N. N. E.* 23 Miles, difference of Lat. 21 Miles North, departure East 8 Miles, Lat. by Judgment 64 *d.* 03 *m.* Meridian distance 94 Miles, Lat. by a good Observation 64 *d.* 03 *m.*

Wednesday, June 14. From the 13th at Noon to this Day Noon the Winds variable, with fresh Gales, Rains, and little Winds. Course per Traverse between the *N. E.* and the *N.* distance sailed by the Log 92 Miles, true Course protracted, all

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Impediments allowed, is North 18 *d.* difference of Lat. 81 Miles, departure East 30 Miles, Meridian distance 124 Miles.

Thursday, June 15. From the 14th at Noon to this Day Noon the Winds variable, with Calms from the *W.* to the *S. W.* Course per Compass *N. N. E.* distance sailed by the Log 67 Miles; true Course protracted, with allowance, is *N. 22 1-2 d. E.* difference of Lat. 62 Miles, departure East 26 Miles, Lat. per Judgment 66 *d.* 26 *m.* Meridian distance 150 Miles East. At Noon broke our Main Top-sail-Yard, being rotten in the Slings; thick hazy Weather.

Friday, June 16. From the 15th at Noon to this Day Noon, a fresh Gale at *W. N. W.* and *W. S. W.* with Rains and thick Weather. Course per Compass *N. N. E.* and *N. E.* by *N.* distance sailed per Log 126 Miles; true Course protracted, is North 30 *d.* East, difference of Lat. 108 Miles, departure East 63 Miles, Lat. per Judgment 68 *d.* 14 *m.* Meridian distance 223 Miles.

Saturday, June 17. From the 16th at Noon to this Day Noon, a fresh Gale at *W. N. W.* and *W.* with Rain and cloudy Weather. Course per Compass *N. E.* distance sailed by the Log 127 Miles, difference of Lat. 90 Miles, departure East 90 Miles, Lat. per Judgment 69 *d.* 48 *m.* Meridian distance 303 Miles, but by a good Observation at Noon Lat. 69 *d.* 53 *m.* difference of Lat. between the Dead Reckoning and Observation, is 9 Miles; which imputed to a Westerly variation, which is found by an Azimuth 7 *d.*

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7 d. Meridian distance corrected, is 300 Miles; fair Weather.

Sunday, June 18. From the 17th at Noon to this Day Noon, the Wind from *W. N. W.* to the *W. S. W.* fair Weather. Course *per* Compass *N. E.* by *E.* distance sailed by the Log 83 Miles; true Course protracted, and Variation allowed, is East 33 d. North, difference of Lat. 47 Miles, by good Observation, departure 66 Miles, Lat. by a good Observation 70 d. 30 m. Meridian distance 367 Miles East. Yesterday and this Day we saw many Whales.

Monday, June 19. From the 18th at Noon to this Day Noon, a fresh Gale at *W.* by *S.* thick hazy Weather with Rains; at seven a Clock in the Forenoon saw many Sea Fowls, more than at any time yet, with many Jubartesses; at ten a Clock saw the Land, being the Islands that lie about 20 Leagues to the Westward of the North Cape; true Course allowed for Variation is *N. N. E.* distance sailed by the Log 135 Miles, difference of Lat. 50 Miles, departure East 30 Miles, Lat. *per* Judgment 71 d. 20 m. Meridian distance 497 Miles. At Noon the Island *Sanden* bore *S.* by *E.* about 8 or 9 Leagues off this Island is a high craggy Land, with some Snow on the Land.

Tuesday, June 20. From the 19th at Noon to this Day Noon, Course *per* Compass between the *E. N. E.* and the *N. E.* distance sailed by the Log 128 Miles, true Course allowed for the Variation, is North 43 d. East difference of Lat. 91 Miles, departure 88 Miles East, Lat.

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per Judgment 72 d. 51 m. Meridian distance 585 Miles. From Yesterday Noon to this Day Noon, the first 12 Hours a fresh Gale at S. W. but the last 12 Hours much Wind, with small Rains and great Fogs; saw many Sea Fowls.

Wednesday, June 21. From the 20th to the 21st at Noon, a stiff Gale with Gusts, and small Rains. Course per Compass N. E. distance sail'd per Log 35 Miles, true Course allowed by Variation, is N. 40 d. East difference of Lat. 103 Miles, departure East 86 Miles, Lat. per Judgment 74 d. 34 m. Meridian distance 671 Miles; thick cloudy Weather, saw many Sea Fowls.

Thursday, June 22. From the 21st to the 22d at Noon, Course per Compass N. E. distance sail'd per Log 116 Miles, true Course allowed by Variation, and Leeward way, is North 43 d. East difference of Lat. 85 Miles, departure East 79 Miles, Lat. per Judgment 75 d. 59 m. Meridian distance 750 Miles East; the Wind at N. W. a fresh Gale, Weather variable, sometimes cloudy, and sometimes fair, but very cold.

At Noon we saw Ice right a Head about a League off, we sail'd close to it, and found it to lie away E. S. E. and W. N. W. we bore away E. S. E. along the Ice: In the Afternoon we had some small Snow, and very cold Weather.

Friday, June 23. From Yesterday Noon to this Day Noon we steered along the Ice, finding it to have many Openings, which we sail'd into, but found them to be Bays; our true Course sail'd along the Ice, the Variation allowed, was East 14 d. South 77 m. Lat. per Judgment 75 d.

41 m.

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41 *m.* difference of Lat. 19. *m.* departure 74 Miles;
Meridian distance 824 Miles, Wind *N. N. W.*

At Noon we sounded, and had 158 Fathom soft green Oar, and found the Current to set *S. S. E.* we have found very smooth to Leeward of this Ice, and in some Places found Pieces of the Ice driving off a Mile, sometimes more or less from the main Body of the Ice, finding it to be in several strange Shapes, resembling Trees, Beasts, Fishes, Fowls, &c. The main Body of the Ice being low, but very craggy, being many Pieces lying close together, and some a top of each other; and in some Places we saw high Hillocks of blue Colour; but all the rest of the Ice very white, as though it were Snow. In some Places we saw drift Wood amongst the Ice, we took up some of the Ice, and melted it, and the Water very fresh and good: This Day we found very cold and freezing.

Saturday, June 24. From Yesterday Noon to this Day Noon, little Wind at *N.* by *W.* we steered close along the Ice, failing into every Opening, but could not find any Passage through, neither could we see over the Ice in any Place from our Topmast-Head; true Course protracted, as we sailed along the Ice, is East 34 *d.* South difference of Lat. 24 Miles *S.* departure East 34 Miles, Lat. *per* Judgment 75 *d.* 18 *m.* but by a good Observation at Noon, the Lat. 74 *d.* 50 *m.* the difference between the Dead Lat. and the observed Lat. is 28 Miles, which difference hath been caused by the Current setting *S. S. E.*

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At Noon we sounded, and had 128 Fathom Water, and the Current as Yesterday S. S. E. This last 24 Hours fair Weather, with little Winds, having some small Fogs, but lasted not above half an Hour at a time. Meridian distance 858 Miles.

Sunday, June 25. From the 24th at Noon to this Day Noon, little Wind, with Calms, and the most part foggy, so that we durst not venture in the Ice, but lay by, and stood off; true Course protracted is East 30 d. South difference of Lat. 13 Miles, South departure East 19 Miles, Lat. per Judgment 74 d. 37 m. Meridian distance 877 Miles, East Wind variable from the N. W. to the W. S. W.

At One in the Afternoon the Fog broke up; hard freezing Weather, our Rigging and Sails frozen; for as fast as the Fog fell it freezed.

Monday, June 26. From the 25th at Noon to this Day Noon, little Wind from the N. W. to N. Course per Compass between the W. S. W. and the N. E. distance sailed by the Log 63 Miles, difference of Lat. 7 Miles North, departure East 58 Miles; true Course protracted is East 7 d. North Lat. per Judgment is 74 d. 40 m. Meridian distance 935 Miles.

At Noon we stood in close with the Ice, and saw something to move, we judging it might be Sea-Horses, or Morfes, lying on the Ice, we sent our Boat to see, and they found two Sea-Horses upon the Ice; they fired several Shot at them, but could not kill them: Notwithstanding that they were much wounded, they got into the Water, and so went under the Ice. We have found the

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Ice to lie away East, these 24 Hours the Wind at North, and very cold, and at 12 at Night 70 Fathom green Oar; at nine in the Evening saw Land, the North Part of it bearing E. and the South Part S. E. being high, and covered with Snow, about 15 Leagues off. Sounded, and had 125 Fathom.

Tuesday, June 27. From Monday 26 to Tuesday 27, little Wind from the N. W. to the N. by E. with Calms; we kept close with the Ice, and found it joyn to the Land of *Nova Zembla*; true Course protracted is E. by N. 30 Miles, difference of Lat. 16 Miles, departure E. 29 Miles, Lat. *per* Judgment 74 d. 46 m. Meridian distance 964 Miles, at Noon 83 Fathom Water, about 6 Leagues from the Shore; we rowed in towards the Shore, and found the Ice to lie about 5 Leagues from the Shore; we went out of our Boat on the Ice, and killed a young Sea-Horse, or Mors, and saw many more, but could not kill them with Muskets, notwithstanding we fired 7 Muskets into one of them, neither could we come to lame them; for they get into the Sea before you can come to them; they keeping Watch, and are very shy, always lying on the brink of the Ice, ready to take the Sea. We sounded, and had 80 Fathom Water green Oar, at which time we saw the Ground plain, being very smooth Water. Meridian distance from the Ship to the Land 15 Miles, which maketh Meridian distance from the Land to this Place 980 Miles.

Wednesday, June 28. From the 27th at Noon to this Day Noon, very little Wind, but the mo-

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Part calm from the *N.* to the *W.* true Course protracted *W. N. W.* 10 Miles, Lat. *per Judgment* 74 d. 46 m. Meridian distance 970 Miles. In the Afternoon stood in close with the Ice, and found it to joyn to the main Land; at Night stood off from the Ice.

Thursday, June 29. From the 28th at Noon to this Day Noon, little Wind, with Rains; we stood away from the Ice to see; true Course allowed is South 27 d. West 20 Miles, difference of Lat. 16 Miles, departure 8 Miles, Lat. *per Judgment* 74 d. 40 m. Meridian distance 964 Miles. At Noon the Wind at West, and *W.* and by *S.* a fine Gale, but very foggy Weather; we stand away South to get from the Ice, we being inoayed in it. At 11 at Night the *Prosperous Pink* fired a Gun, and bore down upon us, crying out, Ice on the Weather-Bow, with that we clap'd the Helm hard a Weather, veered out the Main-Sheet to ware the Ship; but before the Ship could ware, and bring to upon the other Tack, she struck on a Ledge of Rocks which lay sunk.

From 12 at Noon to 11 a Night thick foggy Weather, the Wind from the *N. W.* to the *W.* by *S.* Course *per Compas*s between the *S. W.* and the *S.* by *W.* close haul'd; but at Night the *Prosperous Pink* saw the Sea break on the Weather-bow, bearing down upon us, cryed out it was the Ice; with that we presently bore up round to bring to upon the other Tack, but our Ship not wearing round, run on a Ledge of Rocks, were stuck fast; but Captain *Flawes* Ship got clear, wearing more rounder; we fired several

Guns, to give Captain *Flawes* notice of our Distress; we used all means possible to get her off, by carrying out a Hauler and Anchor, and staving of Water and Beer, and throwing Provision over-board, but could not get the Ship off, for the Water did Ebb, and the Ship sued above 3 Foot; but when the Flood came, it brought a great Sea with it, and the Ship beat very hard; we used all means to heave her off, but could not, and the Ship making Water more than we could pump; with that we cut our Masts by the Board, and sent our Yawl unto the Shore to discover some Place to Land, at whose Return aboard, brought word that there was landing; with that we got up Bread out of the Bread-Room, and brought it up into the great Cabbin; and the Carpenter made ready to save some Tools, and Necessaries to rebuild our Long-Boat to save our Lives, if so necessitated, that Captain *Flawes* should not return to us. So about 12 at Noon we got all our Men ashore, except two which were drowned in the Pinnace, by a Sea which broke into her, just as she put off from the Ship Side; having Bread, Powder, and Provisions in her, and all lost with the Pinnace. Also, to our great Grief, having nothing but the Long-Boat, to trust in, to save our Lives, which could not carry above 30 Men of 70. We used all means to save Bread, but the Ship filling up to the upper Deck, we were forced to leave her, having saved but two Bags of Bread, with some Pieces of Pork, and a little Cheese; this being all on Shore, we carried our Provisions, and other Ne-

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cessaries, upon a Hill, where came to visit us one of the Natives, which was a prodigious great white Bear, which one of our Men shot at, and as we supposed hither, which made her run away; with that we made all haste to build us a Tent to keep us from the Cold, and to keep our Provisions dry, having saved Canvas for the purpose, which we laid over Oars and Spars, and threw up a Trench of Earth round us, to preserve us from wild Feasts; but all this time endured much Cold, most of our Men being wet, and having no Firing; therefore all our Hopes and Prayers were, that God would send us the Ship ashore.

Friday, June 30. A fresh Gale, and very foggy, with a great Sea; our Ship began to split, and much Wreck came ashore; so that we got Oars, Spars and Deals, to build us Tents, and Firing, of which we saved as much as we could; but the Weather proved very foggy to our great Grief, being we could not expect Capt. *Flawes* as long as the Fog continued. The Wind at *W. N. W.*

Saturday, July 1. The Wind at *N. W.* a fresh Gale, the Ship brake in pieces; so that we had much Wreck came ashore, and Provisions, which we endeavoured to save with much Pains and Trouble, the Sea breaking much on the Shore, and the Weather very cold and foggy. We saved two Casks of Flour, some Brandy, and a Butt of Beer, and a Cask of Oil; the Flour did us great kindness to save our Bread, for we made of the Flour, Pancakes, and Pudding, and baked Cakes on Stones, to our great Refreshment.

Sunday, July 2. The Wind at West, and very foggy; we saved more Flour, Butter, and a

few pieces of Beef and Pork, the Cask being staved. The Gunner, as he was saving of Provision, there came a great white Bear to him, which he shot at, and fell'd her down, but she rose again and at him; with that there came more Men, and fired at her; she was a very great one, and very fat, and the Flesh very good, and look'd delicate, and eat well.

Saturday, July 8. The Wind at *W. N. W.* a very great Fog, and all our Men in great Despair of seeing Captain *Flawes*; we beginning to consider our most miserable Condition, and contriving how to save our Lives, the Long-boat not being able to carry above 30 Men, and a Deck built on her, and her Waft raised; with that we concluded to lengthen her 12 Foot, and to carry all our Men; but upon consideration of wanting Materials, and the Carpenters bad Assistance, the Men would not agree to have her cut asunder, for fear she could not be lengthened, but were willing to travel by Land towards the Waygates, in hopes to find some *Russia* Lodges. With that we began to raise her Waft, and build a Deck, the Weather continuing very foggy till *Saturday* Morning, at which time we espied Captain *Flawes*, to our great Joy; with that we made presently a great Fire, and sent our Yawl to meet him, who immediately saw our Fire, and steered into us, and sent his Boat to help to bring off our Men; with that we broke up our new Work, which was done to our Long-boat, and lanch'd her; and about Noon got all on Board Captain *Flawes*, in good Health.

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Journal

*Journal on Board the Prosperous, Captain
William Flawes Commander, from Nova
Zembla to England. 1676.*

Sunday, July 9. From the 8th 12 at Night to this 9th 12 at Noon, the Winds variable, with Fogs and small Rain; we stand off to the Westward; true Course protracted, with allowance for Variation, is West 8 *d.* South, difference of Lat. 8 Miles, departure 67 Miles, Lat. *per Judgment* 73 *d.* 42 *m.* Meridian distance, from Point *Staten*, being the Westernmost Land off of *Nova Zembla*, and the last Land we saw, 67 Miles; very cold Weather.

Monday, July 10. From the 9th at Noon to this Day Noon, the Winds variable from the *S. W.* by *W.* to the *W.* and so to the *N.* and *N. N. E.* with small Rain, great Fogs, and very cold Weather; true Course protracted is West 35 Miles, Variation allowed 12 *d.* West; Meridian distance 102 Miles; a great Sea from the Westward.

Tuesday, July 11. From the 10th at Noon to this Day Noon, the Winds variable from the *N.* *N. E.* to the *N. W.* Course *per Compass W.* by *S.* distance sailed by the Log 102 Miles; true Course allowed for Variation, is West 68 3-4 South; distance of Lat. 34 Miles, departure 96 Miles, Lat. *per Judgment* 73 *d.* 06 *m.* Meridian distance

distance 198 Miles; thick cloudy Weather, and very cold.

Wednesday, July 12. From the 11th at Noon to this Day Noon, little Wind and variable, with Calms, small Rains, and Fogs; distance sail'd by the Log 27 Miles, between the W. by N. and the W. by S. true Course allowed, with all Impediments, is West; at Noon Lat. by Observation 73 d. 34 m. which is 34 Miles more Northerly than expected; the Variation, I suppose, came from the Lat. we departed from on *Nova Zembla*; Meridian distance corrected is 222 Miles West; at Noon calm and fair Weather.

Thursday, July 13. From the 12th at Noon to this Day Noon, the Wind variable from the W. to the S. S. W. a fresh Gale; we ply to the Westward close haul'd. Course per Compass between the S. S. W. and the W. N. W. true Course protracted, all Impediments allowed, is W. by N. 1-2 N. 69 Miles, difference of Lat. 17 Miles, departure 59 Miles; Lat. by Judgment 73 d. 51 m. Meridian distance 279 Miles: Cold cloudy Weather, with small Rains.

Friday, July 14. From the 13th at Noon to this Day Noon, the Winds variable from the S. S. W. to the W. N. W. a fresh Gale, and sometimes little Wind; we ply to the Westward, sometimes on one Tack, and sometimes on the other; true Course protracted, all Impediments allowed, is W. S. W. 1-2 S. difference of Lat. 9 Miles South, departure W. 20 Miles. Lat. per Judgment 73 d. 35 m. Meridian distance 299 Miles,

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Saturday, July 15. From the 14th at Noon to this Day Noon, the Winds fresh, with Gusts from the N. W. to the W. we ply to the Westward, sometimes to the Southward; distance sailed by the Log 70 Miles; true Course protracted is S. W. 33 d. 45 m. difference of Lat. 52 Miles, departure West 34 Miles, Lat. *per* Judgment 72 d. 43 m. Meridian distance 333 Miles; cold and cloudy.

Sunday, July 16. From the 15th at Noon to this Day Noon, the Wind at W. S. W. and W. by S. a fresh Gale; but from 8 at Night till 8 in the Morning much Wind, we lay a try under a Main-sail; true Course protracted Leeward-way, and Variation allowed, is N. by W. 1-4 W. 31 Miles; difference of Lat. 30 Miles, departure West 1 Miles, Lat. *per* Judgment 73 d. 13 m. Meridian distance 340 Miles; Rain, with very thick Weather.

Monday, July 17. From the 16th at Noon to this Day Noon, little Wind from the W. by N. to the W. with Rains, Fogs, and Calms; we ply to the Westward close upon a Wind; true Course protracted, all Impediments allowed, is W. by S. 3-4 W. distance of Lat. 3 Miles, departure 23 Miles, Lat. *per* Judgment 73 d. 10 m. Meridian distance 360 Miles; at 11 in the Forenoon the Wind came up at S. S. E. and foggy.

Tuesday, July 18. From the 17th at Noon to this Day Noon, the Winds from the South to the W. S. W. we ply to the Westward close haul'd, between the W. and N. W. distance sailed by the Log 73 Miles; true Course protracted is W. by N. 1-4 N. 80 Miles, distance of Lat. 18 Miles,

18 Miles, departure 77 Miles, Lat. *per* Judgment 73 *d.* 28 *m.* Meridian distance 437 Miles; thick foggy Weather.

Wednesday, July 19. From the 18th at Noon to this Day Noon, the Wind at S. W. and S. S. W. with very thick Fogs. Course *per* Compass W. N. W. and W. close haul'd; distance sail'd by the Log 74 Miles, true Course, Variation and Leeward-way allowed, is W. N. W. 1-2 N. 70 Miles, difference of Lat. 32 Miles, departure 60 Miles, Lat. *per* Judgment 74 *d.* Meridian distance 497 Miles, at Night much Wind, we land our Top-sails.

Thursday, July 20. From the 19th at Noon to this Day Noon, for the most part much Winds at W. S. W. and S. W. with great Fogs; we ply close upon a Wind N. W. by W. and West-north-west; distance sail'd by the Log 65 Miles; true Course, Variation and Lee-way allowed, is North-north-west 3-4 West, distance of Latitude 55 Miles, departure 33 Miles, Latitude *per* Judgment 74 *d.* 55 *m.* Meridian distance 530 Miles.

Friday, July 20. From the 20th at Noon to this Day Noon, the Wind from the South-west to the West. Course *per* Compass South by West upon one Tack, and West-north-west on the other, close haul'd; distance sail'd by the Log 61 Miles; true Course protracted, all Impediments allowed, is South by West 3-4 West 48 Miles, distance of Lat. 45 Miles, departure 16 Miles, Lat. *per* Judgment 74 *d.* 12 *m.* very thick, foggy and cold, till about Noon it cleared up.

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Saturday, July 22. From the 21st at Noon to this day 4 in the Morning, the Wind at *S. W.* by *W.* and *S. W.* with thick Fogs. Course *W.* by *N.* and *N. N. W.* 46 Miles, at which time it was very foggy Weather; we saw many Willocks and other Sea-Fowles more than usual, which made us think we were near the Land of *Cherry-Island*; we cast the Lead, and had 60 Fathom, a rough Sand; with that, we tack'd and stood off *S. S. E.* and *S. E.* by *E.* 9 Miles, till Noon, at which time we sounded, and had 78 Fathom; Lat. at 4 in the Morning, by Judgment 74 *d.* 26 *m.* Meridian Distance 589 Miles, at which time I was, by my Reckoning, 13 Leagues West from *Cherry-Island*, according to the Meridian Distance I made from the Cape to *Nova Zembla*, and from *Nova Zembla* back here; Lat. at Noon, by Judgment, 74 *d.* 20 *m.* Meridian Distance 582 Miles.

Sunday, July 23. From the 22^d at Noon to this day Noon, the Winds variable, with great Fogs, from the *S. S. E.* to the *W. N. W.* Course per Compass between the *S. W.* and *W.* Distance sail'd by the Log 91 Miles; true Course protracted is *S. W.* by *S.* 87 Miles Difference of Lat. 76 Miles, Departure 43 Miles, Lat. per Judgment 73 *d.* 08 *m.* Meridian Distance 625 Miles; At Noon, no Ground with 160 Fathom Lines.

Monday, July 24. From the 23^d at Noon to this day Noon, little Winds and variable, with Calms; true Course allow'd, is *S. S. W.* 3-4 *W.* 22 Miles, Distance of Lat. 18 Miles, Departure 11 Miles,

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11 Miles, Lat. *per* Judgment 72. d. 50 m. Meridian Distance 636 Miles.

Tuesday, July 25. From the 24th at Noon to this day Noon, the Wind variable, with fresh Gales from N. by W. to E. with Fogs. Course between the W. S. W. and S. W.; Distance sail'd by the Log 88 Miles, true Course allow'd for 9 d. Variation is S. W. 1-2 Westerly, Distance of Lat. 54 Miles, Departure 69 Miles, Lat. *per* Judgment 71 d. 56 m. Meridian Distance 705 Miles.

Wednesday, July 26. From the 25th at Noon to this day Noon, the Wind variable from the E. by N. to the S. with thick Fogs. Distance sail'd by the Log 73 Miles; Course *per* Compass between the S. W. by W. and W. N. W: True Course protracted is W. 1-2 S. distance of Lat. 7 Miles, Departure 67 Miles.

Thursday, July 27. From the 26th at Noon to this day Noon, the Winds from the S. to the S. W. with great Fogs. Distance sail'd by the Log 68 Miles; true Course allow'd W. 1-2 S. Difference of Lat. 7 Miles, Departure 62 Miles W.

Friday, July 28. From the 27th at Noon to this day Noon, the Wind from the S. S. W. to the S. E. Course *per* Compass between the W. by N. and the S. W. close upon a Wind; Distance sail'd by the Log 85 Miles; true Course protracted is S. W. by the W. 1-4 80 Miles, Distance of Lat. 46 Miles S. Departure 64 Miles W. Thick Fogs with small Rain.

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of a North-East Passage. 173

Saturday, July 29. From the 28th at Noon to this day Noon, much Wind from the S. to the S.W. We tried under a Main-Sail three Watches. True Course allow'd is W. 15 Miles.

Sunday, July 30. From the 29th at Noon to this day Noon, the Wind variable from S. E. to the S. and so to the N. W. with sudden Gusts, with much Rain, then little Wind; at 8 this Morning much Wind at N. W. true Course protracted, all Impediments allow'd, is S. S. W. 66 Miles, Distance of Lat. 60 Miles, Departure 25 Miles.

Monday, July 31. From the 30th at Noon to this day Noon, much Wind at N. W. with Rain. Course per Compass S. W. by S. and S. W. Distance sail'd by the Log 104 Miles; true Course allow'd for Leeward-way and Variation S. by W. 1-2 W. Difference of Lat. 103 Miles, Departure 11 Miles; Lat. per dead Reckoning 68 d. 13 m. but by Observation 68 d. 00 m. Departure accordingly corrected 15 Miles; Meridian Distance 953 Miles.

Tuesday, August 1. From the 31st at Noon to this day Noon, the Wind variable from the N. W. to the S. W. by W. Distance sail'd by the Log 80 Miles, we ply to Windward; true Course protracted, Variation and Leeward-way allow'd, Distance W. S. W. Difference of Lat. 72 Miles, Departure 51 Miles; thick cloudy Weather, with some small Rains and Fogs.

Wednesday, Aug. 2. From the 1st at Noon to this day Noon, from the S. by W. to the S. W. thick

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thick Fogs. Course *per* Compass between the *W.* by *S.* and the *W. N. W.* Distance sail'd by the Log 51 Miles; true Course allow'd is *W.* by *N.* Difference of Lat. 12 Miles, Departure 49 Miles, Lat. *per* Judgment 67 d. 50 m. but by a good Observation Lat. 67 d. 55 m. at Noon clear Weather.

Thursday, Aug. 3. From the 2d at Noon to this day Noon, the Wind from the *W.* to the *S. S. W.* with Fogs and Rain. Course *per* Traverse, we ply to the Windward; true Course protracted, is *S. S. W.* Distance of Lat. 21 Miles, Departure 10 Miles. At Night, much Wind at *S.* we lay under a main Sail.

Friday, Aug. 4. From 8 at Night to this day Noon, a Storm of Wind at *S.* and *S. S. W.* true Course Drift, and all Impediments allow'd, is *N. W.* by *N.* 1-4 *W.* Difference of Lat. 18 Miles, Departure 16 Miles. At Noon, less Wind, we set our Fore Sail.

Saturday, Aug. 5. From the 4th at Noon to this day Noon, the Wind from the *W.* by *S.* to the *N. W.* a very cold Storm; true Course allow'd is *S.* by *E.* Difference of Lat. 75 Miles, Departure 15 Miles. In the Afternoon little Wind.

Sunday, Aug. 6. From the 5th at Noon to this day Noon, fresh Gales, and little Wind from the *W. N. W.* to the *W. S. W.* true Course allow'd *S.* 2-4 *E.* Distance of Lat. 67 Miles, Departure 8 Miles.

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Monday, Aug. 7. From the 6th at Noon to this day Noon, the Wind at S. and S. W. sometimes much Wind, and then calm again; true Course allow'd *per* Judgment, is W. N. W. 1-4 N. 53 Miles; Difference of Lat. 22 Miles, Departure W. 47 Miles; at Noon the Wind came about to the W. N. W. much Wind, and at 8 it blew a Storm at N. W.

Tuesday Aug. 8. From yesterday at Night to this day Noon, a Storm of Wind at N. W. we run away with our Fore-Sail Reef'd. Course *per* Compass S. S. W. Distance sail'd by the Log 116 Miles; true Course allow'd is S. Distance of Lat. 107 Miles, Departure W. 5 Miles.

Wednesday, Aug. 9. At 3 in the Morning a fresh Gale, saw many Willocks and other Sea-Fowls, and at 5 saw the Land E. S. E. from us, being high Land, and making like Islands, being the Isles of *Fero*. At Noon, Lat. by a good Observation 61 d. 45 m. at which time the Westernmost Island bore E. about 8 Leagues off.

Distance sail'd from Yesterday Noon to this day Noon 120 Miles; true Course allow'd S. by W. 1-4 Westerly, Distance of Lat. 116 Miles, Departure 26 Miles; Latitude *per* Judgment 62 d. 4 m. Distance between the dead Latitude and the observed Lat. 20 Miles; so that the Ship is 20 Miles more Southerly, and consequently more Westerly; Meridian Distance 1129 Miles, but by Correction 1136 Miles; We saw a small Vessel, and gave chase to her, but she made from us.

Thursday,

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Thursday, Aug. 10. From the 9th at Noon to this day Noon, a fresh Gale at North-west. Course between the South and East-south-east to get clear of the Islands in the Night; Distance sail'd by the Log 102 Miles; true Course protracted is South-east by East 1-4 South, Distance of Lat. 58 Miles, Departure 76 Miles: Spoke with the Ship we saw yesterday, being a *Lyn-man* come from the Island.

Friday, August 11. From the 10th at Noon to this day Noon, the Wind at North-north-west. Course *per* Compass South-east by East; Distance sail'd by the Log 83 Miles: At Noon, the Island *Foule* bore North-east by East about Three Leagues off: The Wind came about at South.

Saturday, August 12. From the 11th at Noon to this Day Noon, the Wind variable, with great Gusts and Rain: At Noon, the *Ockney* Islands bore West about 4 Leagues; the *Ockney* Isles are low, such as we saw at the same time we saw *Fair Isle*, being high Land, and about 6 Leagues off: We found the Tide of Flood to set in very strong between the *Ockney* and *Fair* Isles.

At 3 at Night came a sudden strong Gust and put us under a main Sail Reef, at which time *Catnose* bore by Judgment about eight Leagues off, West by South; we try'd away South-east, the Wind at West-South-west, great Storm.

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Sunday, August 13. From last Night eight a Clock to this day four in the Afternoon, a great Storm of Wind from the West by South to the West-north-west; we tryed away under a main Sail Reefed, making her way good by Judgment South-east 37 Miles. Latitude *per* Judgment 58 d. 16 m, Departure from *Catnose* 47 Miles East; saw many Pitterals about the Ship: At Night less Wind.

Monday, August 14. From the 13th at Noon to this day Noon, a fresh Gale. Course *per* Compass South; Lat. by a good Observation 56 d. 38 m. fair Weather.

Tuesday, August 15 From the 14th at Noon to this day Noon, little Wind from the West-north-west. Course *per* Compass South; Distance sail'd by the Log 53 Miles; fair Weather; at Noon the Wind came at South; we stood in for the Land, spake with two fishing Busses under *English* Colours, but they were *Dutch*; at 6 at Night we got in with the Land, about two Leagues to the Northward of *Tinmouth* Castle; we tack'd and stood off, the Wind at South.

Wednesday, August 16. The Wind from the South to the South-south-east. At Noon *Tinmouth* Castle South-west about 2 Leagues off; we ply to the Southward.

Thursday, August 17. From the 16th at Noon to this day Noon, the Wind at West-south-west. At Noon much Wind, we reefed our Courses, and stand along the Shore to the Southward;

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ward; at 2 a Clock *Flamborough* Head West about 2 Miles.

Friday, Aug. 18. The Wind at West-south-west. At Noon we anchor'd a League to the Northward of *Cromer*, the Tide being spent.

Saturday, August 19. At 6 in the Morning weigh'd with the Tide, and turn'd up *Yarmouth* Roads, anchor'd right against the Town; at 8 at Night weigh'd and turn'd up above the Pier and anchor'd, the Tide being spent; the Wind at South-west.

Sunday, August 20. At eight in the Morning weigh'd with the Tide of Flood, and turn'd to Windward; at 4 in the Afternoon anchor'd with the Tide of Ebb in *Southwold*-Bay in 8 Fathom Water, the Church bearing North-north-west. Winds from the South-south-west to the South-south-east, a fresh Gale.

Monday, August 21. At 8 at Night weigh'd with the Tide of Flood, and turn'd up into *Alborough* Road, and anchor'd there: At Four the next Morning Lieutenant *Whitlock* went ashore at *Alborough* to take Horse for *London*.

At 9 in the Morning weigh'd with the Tide of Flood, the Wind at West-south-west, a fresh Gale, and turn'd up into the Sleeway, and anchor'd there, about 5 in the Evening in 9 Fathom Water, the *Naze* Land bearing West by North.

Tuesday, August 22. At 10 a Clock weigh'd the Wind at West-south-west, and turn'd Windward with the Flood.

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At 5 in the Morning anchor'd upon the Tide of Ebb, two Miles below the middle Ground.

At Noon weigh'd with the Flood, and turned to Windward, the Wind at West by South, at 6 anchored below the Shore.

Wednesday, August 23. The Wind at West-North-west; at 4 in the Morning weigh'd Anchor, and turned up a Mile above the *Buoy* of the *Nore*, and anchored upon the Ebb about 8 a Clock.

At one a Clock weigh'd Anchor, the Wind at West-north-west, we turned up the River.

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Now, after the JOURNAL, I do intend to shew my Conceptions of the said Voyage, and a true Relation of our Mis-carriage; with some Observations made in the said Voyage.

THE first was the following the Opinion of *William Barrans*, that was to steer directly North-E from the North Cape, and to fall in the Mid-way betwixt *Greenland* and *Nova Zembla*; for having made the Land to the Westward of the North-Cape, the 19th day of *June*, I steer'd away North-east by Compass, which was not so much by the true Course, because of the Variation that is there Westerly; and the 22d day at Noon we saw the main Body of Ice, being in the Lat, of 76 d. and about 60 Leagues to the Eastward of *Greenland*. At the first seeing of Ice, I did imagine it had been the Ice that join'd to *Greenland*, and that if I went more Easterly there might be a free Sea, so I ran close by the Ice, it lying away East-south-east, and West-north-west, and every League, or less, that we

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ran, we met with a Cape of Ice; so when we were about that, we could see no Ice to the Northward, so standing in North-east, sometimes two Glasses, that is one hour, we could see more Ice a Head, and then we were forc'd to go out the same way we came in, and thus I continu'd coasting the Ice, sometimes with great Hopes of a clear Sea, and then again dishearten'd by seeing more Ice; till at last I had no Hopes at all, which was when I saw the Land of *Nova Zembla*, and the Ice join to it. So here the Opinion of *William Barrans* was confuted, and all the rest of the *Dutch* Relations, which, certainly, are all forg'd abusive Pamphlets, as also the Relations of our own Countrymen. But certainly, if Men did really consider the many individual Dangers and Mischiefs that comes upon the broaching of such Untruths, they would never do it; for I do now verily believe, that if there be no Land to the Northward of the Lat. of 80 d. that the Sea that is there is all frozen, and always continu'd so; for I that could get no farther than 76 d. found it so frozen without Intermission; and some of the Ice that we saw, that was on the main Body of it, had been convey'd 10 Degrees more Southward, would have taken some Centuries of Years to thaw it: For the loose Ice that lay about the Edges of the main Body, was not more than a Foot thick in some Pieces above the Superficies of the Water, and the rest of the Cake that was sunk, was more than 18 Foot below. So I conclude that those vast Mountains that were on the main Body were

all on Shore, as of necessity they must, if they hold the same Proportion; and considering the Shallowness of the Water, which I found all along the Ice, which, in the mid-way between the two Lands, I found to be no more than 70 Fathom, was doubtless a Sign that to the Northward is Land, and that the main Body of Ice that lyeth crufted about the Shore, may be 20 Leagues or more, and that *Nova Zembla* and *Greenland* are the same Continent; for, if there had been any Passage, there would have been some Current, which I could never, or very hardly find to be any, and the little that was run East-south-east along the Ice, which is nothing else but a small Tide which riseth some 8 Foot. Thus the Ice having been an Obstacle in our way, as also the Cause of my coming so far to the Eastward, which before I never intended.

I will come to the Misfortune that happen'd to us in the Loss of our Ship, which was thus, being amongst the Ice the 29th day of *June* in the Morning, we had like to have been enclos'd in it, it proving likewise foggy Weather, I stood out to the Southward, thinking to lie there till fairer Weather, or to spend some time to the Southward, and then come up to the Ice again, to see if there might be any Alteration in it as to its Removal either East, West, North, or South; but all this day it prov'd foggy dirty Weather, the Wind being at West; so we lay South-south-west with the Stem, and, by our Judgment and Reckoning, the Westernmost Land of *Nova Zembla* bore from us East-south-east, that was 4 Points

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the Shore in the Pinnace, to see if there was any possibility of landing, which I much feared, because the Sea ran so high. In half an hour he returned with this Answer, that it was impossible to save a Man, the Sea ran so high, and the Snow being in high Cliffs on Shore was unaccessible, which was but bad Tidings; so then it was high time to think on the Safety of our Souls, and we went all together to Prayers, to beseech God to have Mercy on us, for now nothing but individual Ruin appeared before our Eyes; after Prayers being done, it proved a little clearer Weather; and I looking over the Stern, saw a small Beach directly with the Stern of the Ship, where I thought might be some possibility of landing; so I sent the Pinnace again with some Men to be landed, but they durst not venture on Shore; so I sent the Long-boat with some 20 Men to Land, who attempted it, and got safe on Shore; so they in the Pinnace seeing that, followed them and their Men likewise, and both returned on Board again, now the Men on the Shore sent to me to desire some Fire-Arms and Ammunition, for there was many Bears on Shore; so I caused to be put into the Pinnace two Barrels of Powder that we had saved dry, before the Ship was belged, and some small Arms, and some Provision, with my own Papers, and Money; but as she put off from the Ship Side, a Sea over-set her, so that all was lost, with the Life of one Man, by Name *John Bosman*, being Cooper's Mate, and several others taken up for dead; the Long-Boat being then on Shore to land more

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Men, and they hearing us call from aboard, (when as then we could not see the Shore) they came on Board and saved the Men, but the Pinnace was all broke to pieces, which was no small Grief to us; so the Long-Boat being on Board, and the Sea running prodigious high, the Boat-swain, and some others, would compel me and the Lieutenant to leave the Ship, saying that it was impossible for the Boat to live any longer in that Sea, and that they had rather be drowned than I; but desiring me when I came on Shore (if it were possible) to send the Boat again for them; so I being half way on Shore, the Ship over-set, so I made all the haste possible to Land them Men I had in the Boat; and having landed them, I went off to the Ship again, to save those poor Men that had been so kind to me before; so with great hazard I got with the Boat to the Quarter of the Ship, and they came down the Ladder into the Boat, only one Man who was left for dead, which was one that had been cast away in the Pinnace, whose Name was *Alexander Frazor*, a very pretty Sailor: So I returned to the Shore, and got safe to Land, though very wet and cold; so we hauled up the Boat on Shore, and went up the Land about a flight shoot, where our Men were making a Fire, and a Tent with Canvas and Oars, which we had saved for that purpose; so we lay all that Night very cold, wet and weary. The next Morning the Man that we left on Board recovered, and got unto the Mizzen-Top; for that Mast we left standing when we came away, the other we had cut all down.

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The Ship laboured, and beat violently, but it blew so hard, and the Sea ran so high, that it was impossible to save him; so the Weather continuing blowing, with extreme Fogs, and with Frost and Snow, and all the ill compacted Weather that could be imagined together. We built more Tents to preserve our selves, and the Ship breaking in pieces came all ashore to the same Place where we landed, which served for shelter and Firing; besides there came to us some Hogsheds of Flour, and Brandy good Store, which was no little Comfort in our great Extremity. Here we lay betwixt Hope and Despair, hoping for fair Weather, that Captain *Flawes* might find us, which was impossible that ever he should do, if it continued foggy; and some despairing of his being safe, but that he might be lost as well as we. But supposing we never was to see him again, I was resolved to try the utmost to save as many as I could in the Long-Boat; in order thereunto we raised her two Foot, and laid a Deck upon her to keep the Sea out as much as was possible, and with this Boat and 30 Men (for she would carry no more) I intended to Row and Sail to *Russia*; but the Men not being satisfied who should be the Men, began to be very unruly in their mind and Behaviour; every one having as much reason to save himself as another, some holding Consultation to stave the Boat, and all to run the like Fortune. But here Brandy was our best Friend, for it kept them always Fox'd; so that in all their Designs I could prevent them; some were of the mind to go by
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Land, but that I knew was impossible to any Man; neither had we Provisions, nor Ammunition to defend us from the Wild Beasts; and if it had been passable, that is any going on the Ground for Bogs, that they would have met with Rivers, that they knew not whither to go; so there being no probability of going by Land, nor for any to attempt going in the Boat, with 40 Men having been first destroy'd. I will leave it to the Consideration of any, whether we were not in a very miserable Condition without Divine Providence: To write my Thought I had at that time, to save as many Men as I could, it is not pertinent at all to the Discourse, since it cannot but be imagined to be Tragical. The Weather continued still very bad with Fogs, Snow, Rain, and Frost, till the 9th Day of our being on Shore, which was the 8th Day of *July*, when in the Morning it cleared up, and to our great Joy, one of the Sailors cried out a Sail, which proved Captain *Flawes*, as reasonable may be imagined; so we set fire to our Town, that he might see where we was, which he presently saw, so came to us, and sent his Boat to us; (but before I went off) I writ a brief Relation of the Intention of the Voyage, with the Accidents that had befallen us, and put it into a Glass Bottle, and left it in the Fortification I had there built. So by twelve a Clock we all got safe on Board, but left all on Shore that we had saved from the Ship; for we much feared it should prove foggy again.

Now

Now I intend to give a brief Description of the Land, and the Observations I made there.

N*ova Zembla* is so called by the *Russians*, which signifieth *New Land* in their Language; to prove it is either an Island, or whether it joyneth to the Continent of *Tartaria*, would be a very hard Task, nor is it certainly known to any; for by Circumstances I think it impossible to prove, and by Experience the Search thereof is so impossible, that it will hardly be tried.

But let it be either, I think the matter is not much, since it is the most miserable Country that lyeth on the Foundation of the Earth; a Country most Part of it covered perpetually with Snow, and that that is bare is not to be walked on, being like Bogs, upon whose Superficies grows a kind of Moss, which beareth a small blue and yellow Flower; and this is all the Product of the Earth of this Country. Under the Superficies of this Earth, about two Foot deep, after we had dug so low, we came to a firm Body of Ice; which, as I think, was never heard of before; so these Men that did imagin, if they were forced to winter to the Northward, would dig Caves in the Earth to preserve themselves from cold,

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would find here but very bad Lodging. The Snow lieth here contrary to what it doth in any other Country; for in all other Climates the Snow melteth soonest away near the Sea Side; but here the Sea beateth against the Snowy Clifts, which in some Places are as high as either of the Forelands in *Kent*: The Sea has washed underneath the Snow a prodigious Way, and the Snow over hanging, most fearful to behold, and up from the Water-side, upon the first Ridge of Hills, the Snow was melted till you come to the next Ridge, which are Mountains, and they all the way up are covered with Snow, which I believe hath lain there ever since the Creation; but after we had ascended this, which in some Places was almost Perpendicular, we came to the top of all the Mountains, as we supposed, for we could not see far; for we could hardly see one the other, the Fog was so thick, and remained so all the time we were in the Country; but on the top of these Hills we found it bare from Snow, and indifferent good walking. The best that I found in the Country were only Bears. I continued on the top of those Hills some two Hours, and went as far as was convenient, that we might find the way back again. Here I found the Track of many large Deer; also we found an Horn of Beam of Deer: Besides Deer, there be abundance of large white Bears, and some Foxes, and a little Creature much like a Coney, but not so big as a Rat; and some few little Birds like Larks, and these be all the Beasts or Fowls we found in the Country. Every quarter of a Mile

Mile there runneth down from the Hills into the Sea a small Rivulet of very good Water, which is melted from Snow. Upon the Hills we found abundance of Slate-stone, which made it good walking; but at the Sea-side, where the Rivulet came down, we found very good black Marble, with white Veins in it.

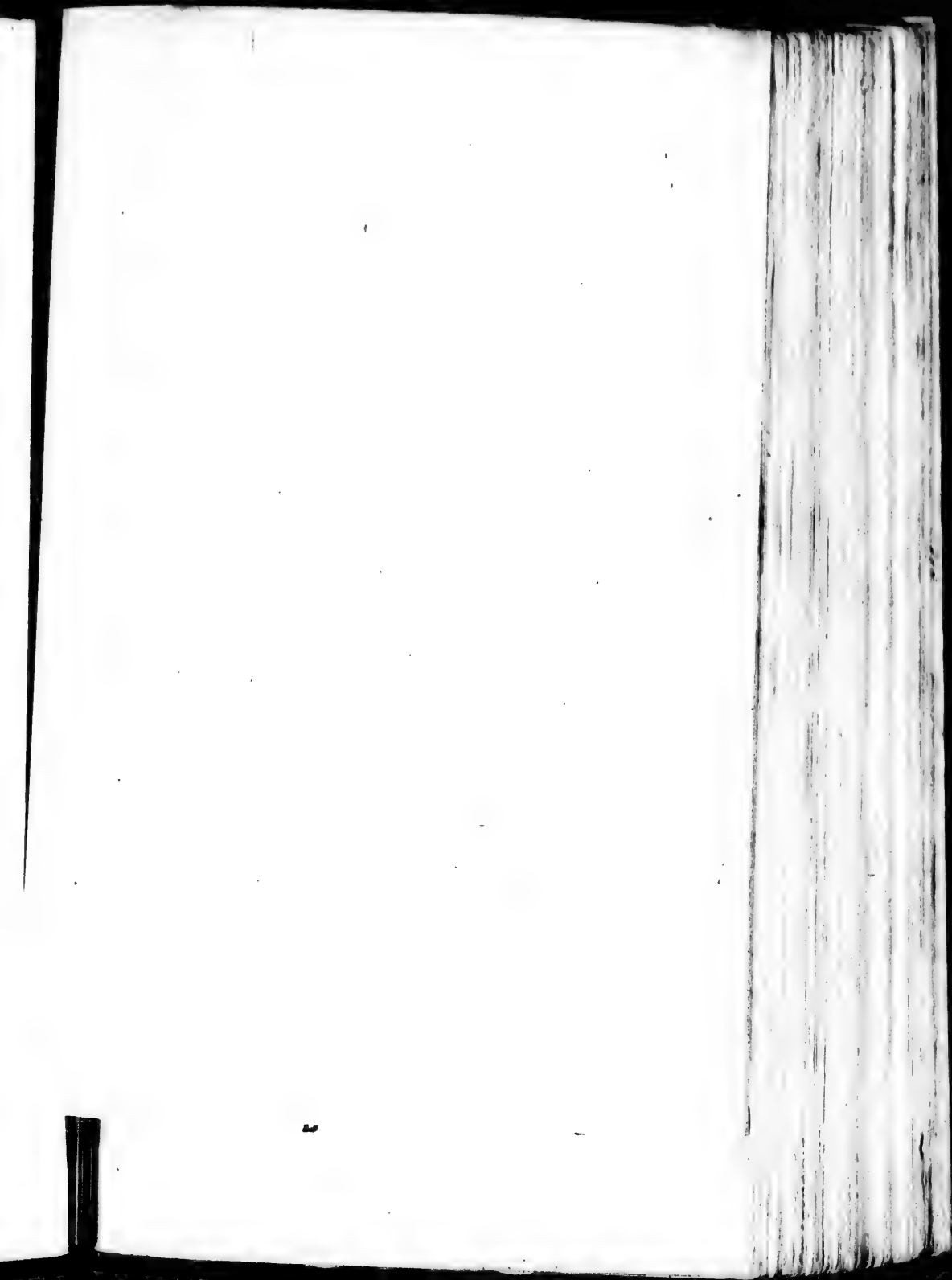
The Point where we lost our Ship I called Point *Speedill*: The high Hills I called King *Charles's* Snow Hills; and the next Point to the Southward, which is the Westermost Point of *Nova Zembla*, I named *James* Foreland, and the Point to the Northward, *York* Point. Point *Speedill* lieth in the Lat. of 74 d. 30 m. North, and in the Longitude East from the City of *London* 63 d. 00 m. The Variation of the Compass is 13 d. West, and it is full Sea at South-West Moon. The Tide riseth 8 Foot, and setteth directly upon the Shore, which is a certain Sign that there is no Passage to the Northward. The Sea Water, about the Ice and Land, is very salt, and much saltier than any I ever yet tasted, and a great deal heavier, and I may certainly say the clearest in the World; for I could see the Ground very plain in 80 Fathom Water, which is 480 Foot, there being few Steeples so high as that was deep, and I could see the Shells at the bottom very plain.

If the Voyage had succeeded, I should, God willing, have given a more full and nice Account of all the Experiments I had, and should have made, especially those of the Magnet, which I forbear here to mention, because I intended to
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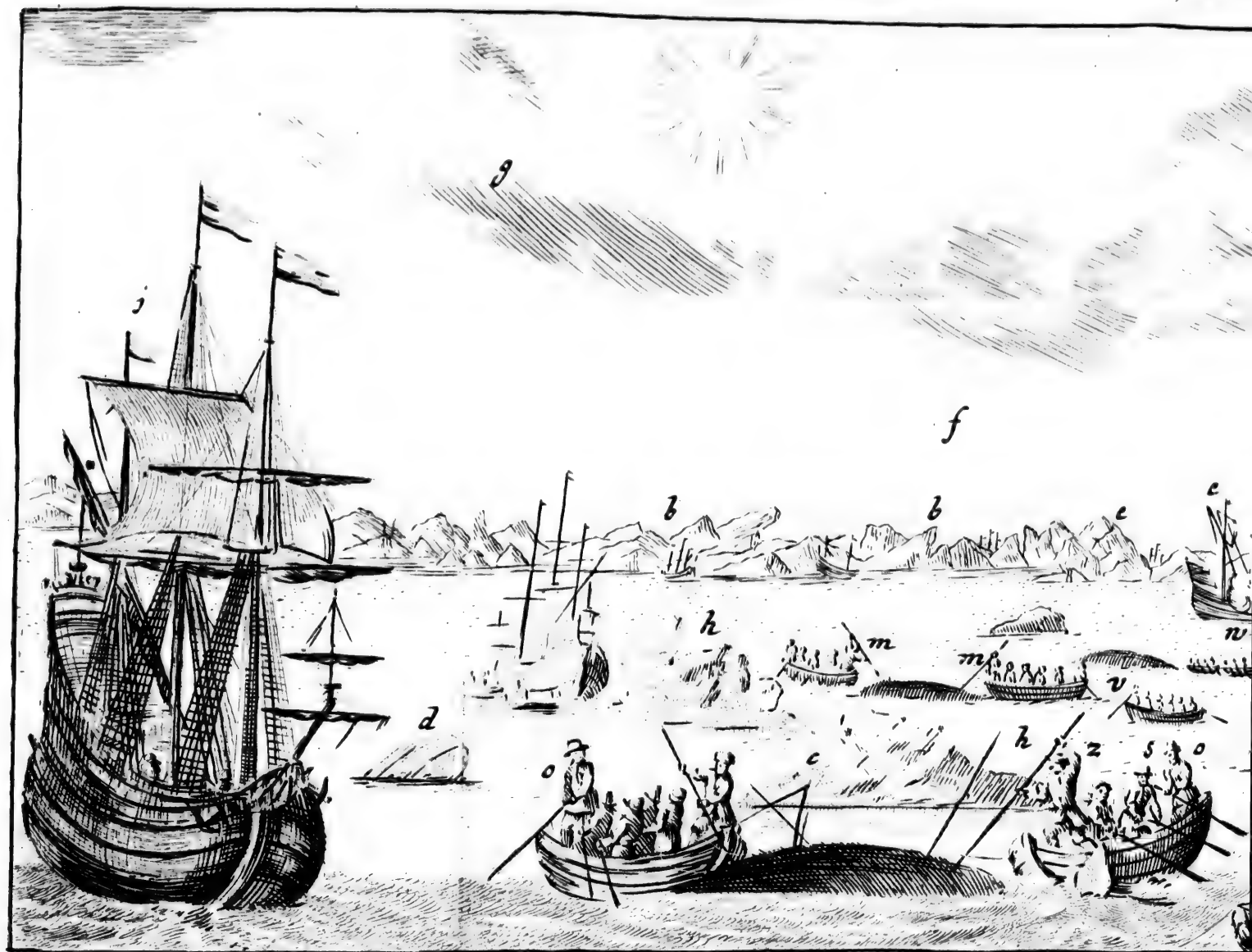
publish them in a Treatise by themselves; so
having with the Ship lost all my Papers, and
with them all I had in the World beside: I me
humbly beg Pardon that I have given no more
ample a Relation.

The Voyage to *Spitzbergen*



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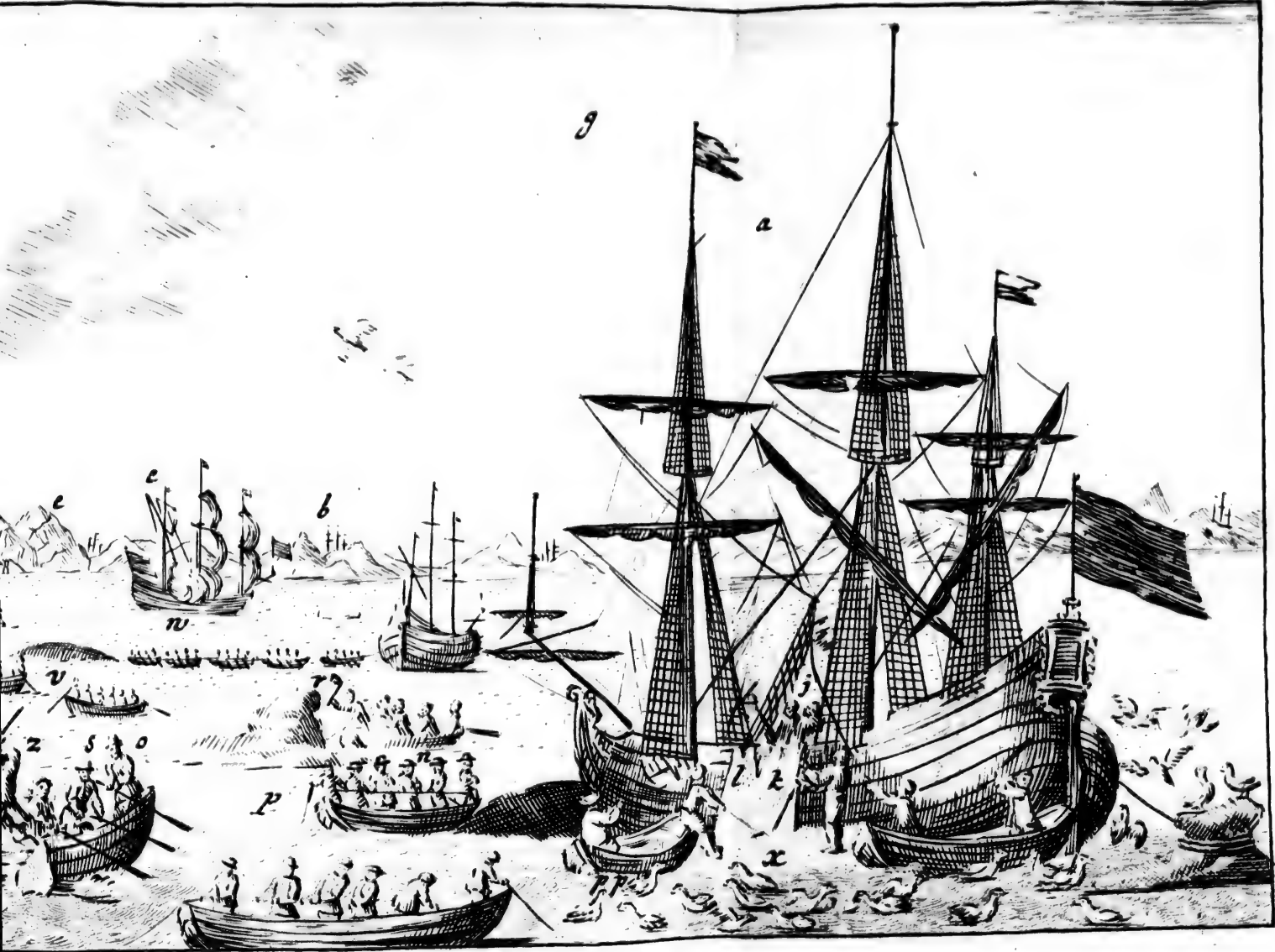
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11. Plate 1. Fig. 1.

Tab. A. Fig. 1.



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THE
FIRST PART
OF THE
VOYAGE
INTO

Spitzbergen and Greenland:

CONTAINING

the Passages of the whole Voyage, together with
some Account of the Weather, from the 15th of
April to the 21st of *August*, Anno 1671.

CHAP. I.

*Of the Voyage from the Elbe to
Spitzbergen.*

WE set Sail the 15th of *April*, 1671.
about noon from the *Elbe*. The
Wind was North-east. At night,
when we came by the *Hilge-land*, it bore to
North-west. The name of the Ship was *Jonas*
the *Whale*, *Peter Peterson* of *Friseland* Master.

B

The

The first Part of the Voyage

The 27th we had storms, hail and snow with very cold weather, the wind North-east and by east, we were in 71 degrees, and came to the Ice, and turned back again. The *Island* of *John Maien* bore from us South-west and by west, as near as we could guess within ten Miles. We might have seen the Island plain enough, but the Air was haizy and full of fog and snow, so that we could not see far. About noon it blew a storm, whereupon we took down our Top-sails, and furling our Main-sail, drove with the Mizen-sail towards South-east.

The 29th it was foggy all day, the wind North-east and by north, we came to the Ice, and sailed from it again, as you may see in the Plate A.

The 30th, the first Sunday after *Easter*, was foggy, with rain, and snow, the wind at North at night we came to the Ice, but sailed from again; the Sea was tempestuous, and tossed our Ship very much.

The 3d of *May* was cold, snowy, with hail and misty-Sun-shine, the wind North-west and by west, the Sun set no more, we saw it as well by night as by day.

The fourth we had snow, hail, and gloomy Sun-shine, with cold weather, but not excessive, the wind at North-west, the weather every day unconstant. Here we saw abundance of *Seales*, they jump'd out of the water before the Ship, and which was strange, they would stand half out of the water, and as it were dance together.

The

The 5th in the forenoon it was moderately cold, and Sun-shine, but toward noon darkish and cloudy, with snow and great frost, the wind North-west and by North. We saw daily many Ships sailing about the Ice, I observed that as they passed by one another, they hailed one another, crying *Holla*, and asked each other how many fish they had caught, but they would not stick sometimes to tell more than they had. When it was windy, that they could not hear one another, they waved their Hats, to signify the number caught. But when they have their full Freight of *Whales*, they put up their great Flag as a sign thereof; then if any hath a Message to be sent, he delivers it to them, as you may see in the Plate *A* by *A*.

The 7th we had moderate frost, clouds and snow with rain. In the evening we sailed to the Ice, the wind was quite contrary to us, and the Ice too small; wherefore we sailed from it. In the afternoon we saw *Spitzbergen*, the South point of the North-fore-land, we supposed it the true Harbour. The Land appeared like a dark Cloud, full of white streaks; we turned to the West again, that is, according to the Compass, which is also to be understood of the Ice and Harbour.

The 9th was the same weather, and cold as before, the Wind South-west and by west. In the afternoon a *Fin-fish*, swam by our Ship, which we took at first to be a *Whale*, before we saw the high fins of his Tail, and came near to it. We had let down our Sloop from the Ship,

The first Part of the Voyage

but that labour was lost, for he was not worth taking.

From the 25th of *April* to this day, we had not taken the Sun's altitude, we were then in 70 degrees and 3 minutes, and sailed towards the North and the Ice. It may seem strange, that we so often sailed to the Ice, and from it again, but I shall give you a reason for that hereafter.

The 12th it was stormy and excessive cold, the wind North, and we had the greatest frosts in this Month of *May*.

On the 14th the wind was North-west, fine weather, with Sun-shine, we were within 75 degrees and 22 minutes. We told twenty Ships about us, the Sea was very even, and we hardly felt any wind, yet it was very cold.

In this place the Sea becomes smooth presently again after a storm, chiefly when the wind blows from the Ice; but when it blows off the Sea, it always makes a great Sea.

The same day we saw a *Whale* not far off from our Ship, we put out four Boats from on board after him, but this labour was also in vain, for he run under water, and saw him no more.

On the 19th we had a dull Sun-shine, the wind was North, and it was so calm that we could hardly feel it; we rowed in the Ship's boat to the Ice, and killed two *Sea-hounds* or *Seales*; there were so many of them on the Ice that they could not be numbred.

On the 20th it was exceeding cold, so that the very Sea was all frozen over; yet it was

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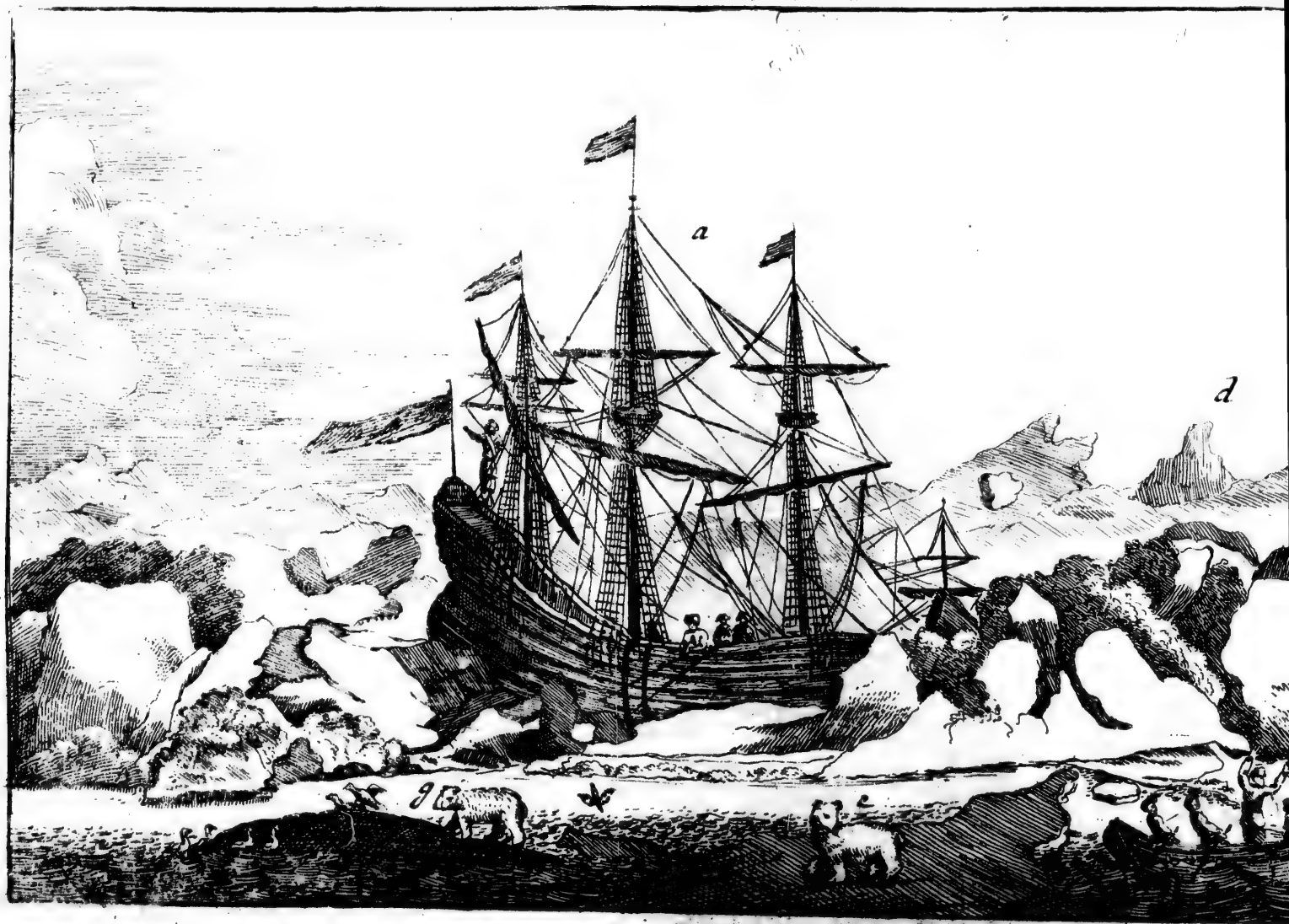
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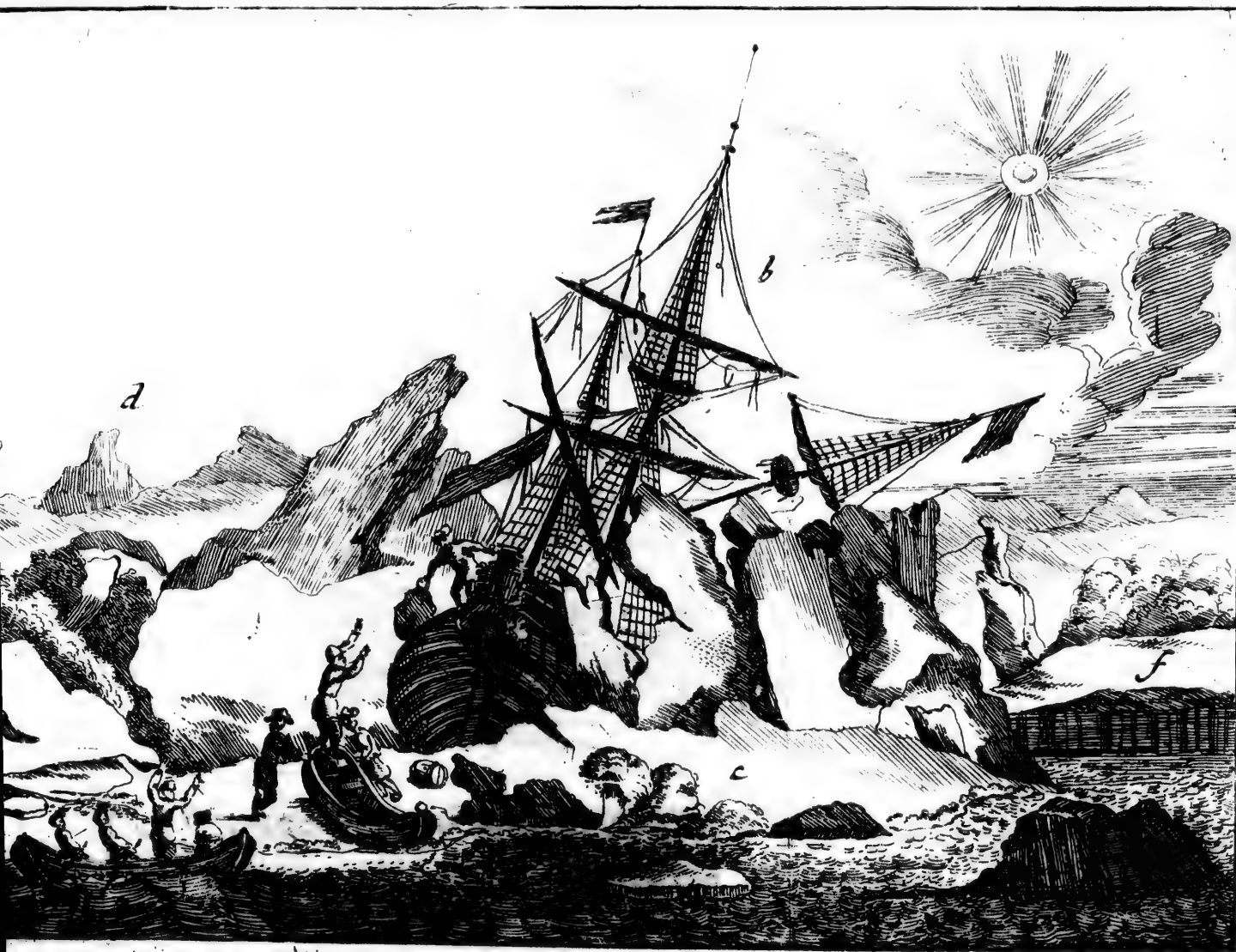
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alm and still, that we could hardly perceive wind, which was North; there were nine in our Company which sailed about the we found still the longer we sailed the ger the Ice.

On the 21st (which was the fourth Sunday Easter) we sailed into the Ice in the forenoon, with another *Hamburger-Ship*, called the *eler*, with 8 *Hollanders*. We fixed our Ship Ice-hooks to a large Ice-field, when the was South-west and by south; we numbred Ships in the Sea; they lay as it were in an hour or Haven, (as you may see Plate A at B.) as they venture their Ships in the Ice with hazard.

On the 30th it was fair weather in the morning, snowy about noon, the wind was South-east and very calm. We rowed in the great ship, before the Ship, farther into the Ice. In morning we heard a *Whale* blow, when the was in the East, and brought the *Whale* to Ship, when the Sun was at South-west and east; the same day we cut the Fat from it, filled with it 70 Barrels (which they call *els*.) By this fish we found abundance of fish, most of them were *Mallermucks*, (that is *ay* foolish Gnats) which were so greedy of food, that we kill'd them with sticks. This fish was found out by the Birds, for we every where by them in the Sea where the *ale* had been, for he was wounded by an *ping-Iron* that stuck still in his flesh, and he also spent himself with hard swimming;

The first Part of the Voyage

he blowed also very hollow, he stank alive, and the Birds fed upon him. This *Whale* fermented when it was dead, and the steam that came from it inflamed our eyes, and made them sore. See Tab. *A* at *a*.

This same night *Cornelius Seaman* lost his Ship by the squeezing and crushing together of the Ice, for in this place are very great Sheets or Islands of Ice, and the Seamen call it *West-Ice*, because it lieth towards the West, as you may see in the Plate *B* marked with *b*.

On the 2d of *June* we had a severe frost in the forenoon, and in the night we saw the Moon very pale, as it used to look in the day time in our Country, with clear Sun-shine, whereupon followed mist and snow, the wind North-east and by north.

In the morning, *June* the 4th, we were a hunting again after a *Whale*, and we came so near unto one, that the Harponier was just a going to fling his Harpoon into her, but she sunk down behind, and held her head out of the water, and so sunk down like a stone (as is to be seen by *d* on the cut *A*) and we saw her no more; it was very like that the great Ice-field was full of holes in the middle, so that the *Whale* could fetch breath underneath the Ice. A great many more Ships lay about this sheet of Ice, one hunted the *Whales* to the other, and so they were frightened, and became very shy. So one gets as many fishes as the other, and sometimes they all get one. We were there several times a hunting that very day, and yet we got never a one.

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On the 8th it was Foggy, and snow'd all day, we saw that day very many (*Sea-dogs* or) *Seales* on the Ice about the Sea-side, so we set out a Boat and killed 15 of them.

On the 12 it was cold and stormy all day, at night Sun-shine; he that takes not exact notice, knows no difference whether it be day or night.

On the 13th in the afternoon it was windy and foggy, we were in 77 degrees; we sailed along by the Ice somewhat easterly towards *Spitzbergen*, as is to be seen in the Cut *A* at *e*. That night we saw more than 20 *Whales* that run one after another towards the Ice; out of them we got our second Fish, which was a Male one; and this Fish, when they wounded him with Lances, bled very much, so that the Sea was tinged by it where he swam: we brought him to the Ship when the Sun was in the North: for the Sun is the Clock to the Seamen in *Spitzbergen*, for else they would live without order, and mistake in the usual seven weekly days.

On the 14th it was cold and windy, the night foggy, the wind blew West, that day we came to *Hans Lichtenberg*.

We arrived at *Spitzbergen*, June the 14th. First we came to the *Foreland* thereof, then to the seven *Ice-hills* or Mountains, then we passed the Harbour or Bay of the *Hamburgers*, *Magdalens*, *English* Men and *Danes*, and sailed into the South-bay: we were followed by 7 Ships, *Hamburgers*, and 4 *Hollanders*, as is to be seen

The first Part of the Voyage

by *a* in the Plate C. For here it is just the same, as when they will sail into the Ice, if more then one is there, for no body cares to be the first, because they do not know in what condition the Harbour or the Ice is within. In our Voyage thither we saw no Ice at all, until we came to *Spitzbergen*, for the Wind had blown it all away; in the night we did cut off the fat of the Fish, and filled with it 65 Kardels or Vessels.

That night we sailed with three Boats into the *Englisb* Harbour or Bay, and saw a *Whale*, and flung into him three Harpoons, and threw our Lances into him; the *Whale* ran underneath the small Ice, and remained a great while under Water before he came up again, and then ran but a very little way before he came up again; and this he repeated very often, so that we were forced to wait on him above half an hour, before he came from underneath the Ice. The Harpoons broke out at length, and we lost him. On the Ice we saw two great *Sea-horses* or *Morses*, that were got upon the sheet of Ice, through a hole that was in it, and were asleep; we cut off their return by covering the hole with a piece of Ice; then we awaken'd them with our Lances, and they began to defend themselves for awhile before they were killed. We saw also many White Fish.

On the 22th we had very fair weather, and pretty warm; we were by *Rebenfelt* (*Deersfeld*) where the Ice stood firm: we saw six *Whales* and got one of them that was a Male, and our

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third Fish; he was kill'd at night when the Sun stood westward: this Fish was killed by one Man, who flung the Harpoon into him; and kill'd him also, while the other Boats were busie in pursuing or hunting after another *Whale*. This Fish run to the Ice, and before he died, beat about him with his tail; the Ice settled about him so that the other Boats could not come to this Boat to assist him, till the Ice separated again, that they might row, when they tied one boat behind the other, and so towed the *Whale* to the great Ship, where they cut him up into the Vessels, and filled with him 45 Barrels. This night the Sun shined very brightly.

On the 29th we had fair weather, Sun-shine and calm. On the same day we sailed before the wide Harbour or Bay, where we found a great quantity of the fat of a *Whale*, three Vessels full, together with the Image of St. *Nicholas*, which stood behind a Ship that was lost, driving in the Sea. There was also here and there still much Ice.

On the 1st of *July* about noon, two *Whales* came near to our Ship; we saw that they had a mind to couple together; we set our Boat for them, and the Harponier hit the Female, which when the other found, he did not stay at all, but made away. The Female run all along above the Water, straight forward, beating about with her tail and fins, so that we durst not come near to lance her, yet one of our Harponiers was so fool-hardy to venture too neer to the Fish, which saluted him with a stroke of her

The first part of the Voyage

her tail over his back so vehemently, that he had much ado to recover his breath again. Those in the other Boat, to shew their valour also, hasten'd to the Fish, which overturned their Boat, so that the Harponier was forced to dive for it, and hide his head underneath the water; the rest did the same; they thought it very long before they came out, for it was cold, so that they came quaking to the Ship again.

In the same morning a *Whale* appear'd near our Ship before the wide Harbour, we put out four Boats from our Ship after him, but two *Holland Ships* were about half a League from us, one of them sent out a Boat towards us; we used great diligence and care to take him, but the Fish came up just before the *Dutchman's* Boat, and was struck by him with a Harpoon. Thus he took the bread out of our mouths.

On the 2d of *July* we had Sun-shine all day and night long, and it was pretty warm withall; about midnight we went a hunting, and caught the fifth Fish, who was a Male; we cut the fat off, and flung it into the Forecastle. This is done when they are very busie in *Whale* catching, that they may not lose time, then they cut great pieces off of the *Whale*, that they may have done the sooner, for it doth not harm the fat if it should lie so for several days; nay, some reckon it to be the better for it, but that cannot be, for the fat runs away from it.

On the 4th we had Sun-shine all day and night. We still were *Whale*-hunting, and that

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night we got the sixth Fish, a Male also, he held 49 *Kardels* of fat.

On the 3d and 4th day of *July* we saw more *Whales* than we did in all our Voyage.

On the 5th of *July* in the forenoon it was bright Sun-shine, and pretty warm, in the afternoon it was foggy, at night Sun-shine again, which lasted all the night. We hunted all that day long, and in the morning we struck a *Whale* before the *Weigatt*; this Fish run round about under the water, and so fastned the Line whereon our Harpoon was about a Rock, so that the Harpoon lost its hold, and that Fish got away. This *Whale* did blow the water so fiercely, that one might hear it at a Leagues distance.

The same day about noon, the wind south, and Sun-shine, we got the seventh Fish, which was a Female, and had 45 *Kardels* of fat; this we cut also into the Hold, and so we sailed from *Weigatt*, a little toward the west before the *Muscle-Harbour*, where we dropt our Anchor; we were employed with cutting the great pieces of fat into lesser pieces, to fill our *Kardels* with them; in the mean while the wind turned to North-west and west, and the single Anchor was dragg'd by the Ship, so we drop'd another, and would have weigh'd up the former, but our Cable broke, the Anchor being fastned to a Rock.

On the 6th we had the same weather, and warm Sun-shine all night. Hard by us rode a *Schellander*, and the Ships crew busie in cutting the

The first Part of the Voyage

the fat of a *Whale*, when the Fish burst with so great a bounce, as if a Cannon had been discharged, and bespattered the Workmen all over.

On the 8th the wind turned North-west, with snow and rain. We were forced to leave one of our Anchors, and thank'd God for getting off from Land, for the Ice came on fiercely upon us; at night the wind was laid, and it was colder, although the Sun shined.

On the 9th we got another Male *Whale*, being the eighth, which was yellow underneath the head; we filled with him 54 *Kardels* with fat; the Sun shined all night.

On the 12th we had gloomy Sun-shine all day. At night we sailed with three Boats into the Ice before the *Weigatt*, and got three white Bears, an old one with two young ones, they swam in the water like Fish. On the Ice lay abundance of *Sea-horses*, and the further we came into the Ice there were the more of them; we rowed up to them, and when we came near to them we killed ten of them, the rest came all about our Boat, and beat holes through the sides of the Boat, so that we took in abundance of water, we were forced at length to row away from them because of their great number, for they gathered themselves more and more together; they pursued us as long as we could see them, very furiously. Afterwards we met with another very great one, who lay in the water fast asleep, but when he felt our Harpoon within him he was very much frightened, and ran away before the Boat again, where

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he was soon eased of his fright by our Lances. We saw but very few *Whales* more, and those we did see were quite wild, that we could not come near them. That night it was so dark and foggy, that we could hardly see the Ships length; we might have got *Sea-horses* enough, but we were afraid of loosing our Ships, for we had examples enough of them that had lost their Ships, and could not come to them again, but have been forced to return home in other ships. When after this manner any have lost their Ships, and cannot be seen, they discharge a Cannon from the Ship, or sound the Trum-pets, or Haut-boys, according as they are provided in their Ships, that the Men that are lost may find their Ship again.

On the 13th we had cloudy Sun-shine, the wind towards night turned to North-east and by east. The Ice came a floating down apace, we sailed from the South-east Land to the west, and we could but just get through by the North side from the *Bear-Harbour* or Bay. We sailed on to the *Rehenfelt* (or *Deer-field*) where the Ice was already fixed to the Land, so that we could not just get through, we sailed further to the *Togelsanck* (*Birds-song*) as you may see by *b* in the Plate D. Then we turned toward the East with a North-east wind, in company with twelve ships more, to see whether there were any more *Whales* left, with *George* and *Cornelius Mangelsen*, and *Michael Apple*, who sailed in four fathoms water, and touched upon the wreck of a Ship that was lost there.

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The first Part of the Voyage

On the 14th in the morning we sailed (thru) amongst the Ice, the wind being North-east and by east; we had a fogg all that day, with Sun shine, with a Rainbow, of two colours, white and pale yellow, and it was very cold, and we saw the Sun a great deal lower.

On the 15th it was windy, cold and foggy the whole day; the wind turned North-west and the Ice came on in abundance, so that we could hardly sail, for it was every where full of small sheets of Ice. At this time there were many Ships beset with Ice, in the *Deer* or *Macle-Bay*. We sailed all along near the shoal and at night we entred the *South-Harbour* (marked with *c* in the Cut *D*) where 28 Ships lay at Anchor, 8 whereof were *Hamburgers*, the rest *Dutchmen*. From that time, when we sailed out of the *South-Haven*, we kept always within sight of the Land, and saw it always except it was foggy; and so long the Skipper stay by the Ice, to see whether there is any more *Whales* to be had. That night we fetched water from the Land, near the *Cookery* of *Hiltingen*, out of a hole, marked by *b* in the Plate.

On the 16th in the morning we saw the Moon, and afterwards it was windy, with abundance of Snow.

On the 18th we had fair weather, with Sun shine, and we were also becalmed that we could not sail, wherefore we towed with a Boat into the *Danish Harbour*, to gather some Herbs from the Rocks. In the *South-Haven* rode 30 Ships at Anchor.

On the 19th we had warm Sun-shine and fair weather, but in the night stormy and rain.

On the 20th storms, rain, and a great deal of snow, the wind South-west.

On the 21st rain all day long.

CHAP. II.

Of our home Voyage from Spitzbergen to the Elbe.

ON the 22d day of July in the Morning, when the Sun was North-east, we wayed our Anchors, and sailed out of the South-Haven: we had a fogg all day long, and Sun-shine at night; in the night we saw abundance of Fin-Fishes.

On the 24th it was so warm with Sun-shine, that the Tar wherewith the Ship was daubed over melted; we drove, it being calm, before the Haven or Bay of Magdalen.

On the 25th it was cloudy, and Sun-shine, but cold withal; at night we came to the Forelands; the night was foggy, the wind South-west.

On the 26th we had the very same weather all day, the Sun was very low in the night.

On the 28th we turned from the side of the North-foreland towards the west, when the Sun was South-east; and we did sail South-west and

The first part of the Voyage

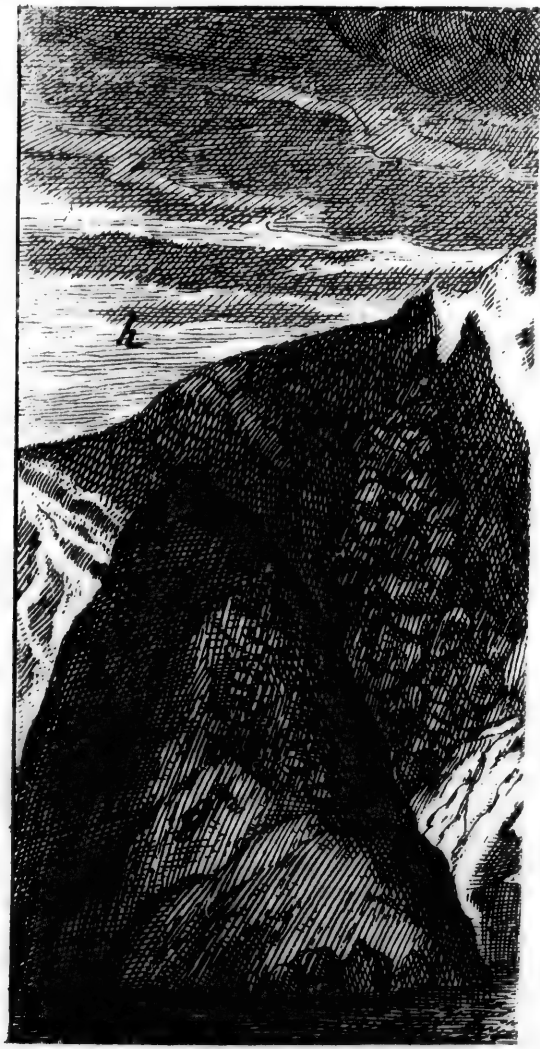
and by west towards the Sea; then we changed our Course Southwards, and stood South-east.

On the 29th, 30th and 31st we sailed South-east and by South all along by the Land, the South side of the *Foreland* was 8 Leagues from us, bearing North-east, then we sailed South-west and by South, it was very cold with North-west wind. We saw daily abundance of *Fin-fishes*, but no more *Whales*.

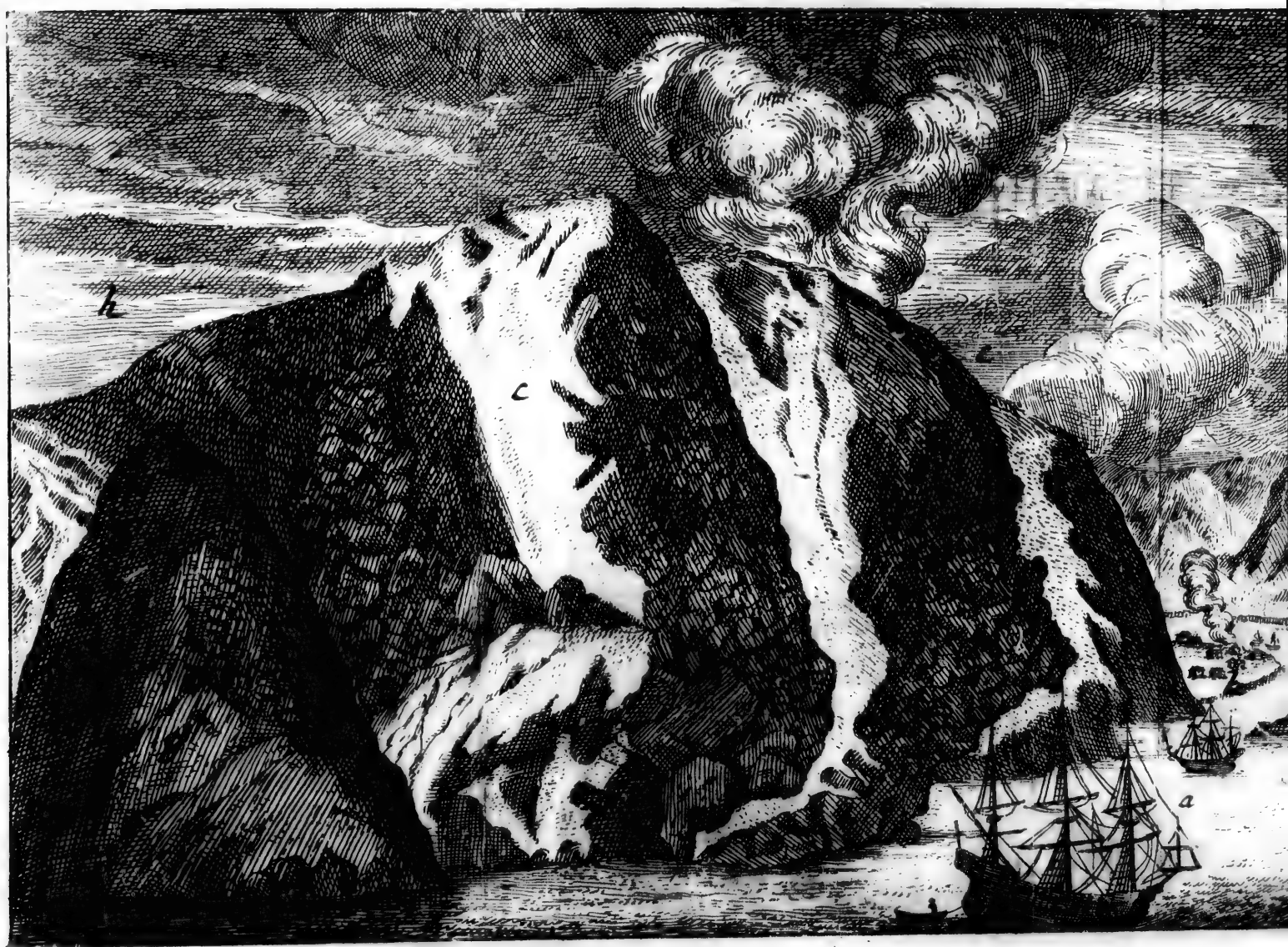
On the 9th of *August* it was windy all day with a gloomy Sun-shine in the forenoon; cleared up towards noon; the wind was South-east, when we took the Meridian height of the Sun, and were at 66 degrees 47 minutes; we sailed South-westward all along the Northern shoar of the Country.

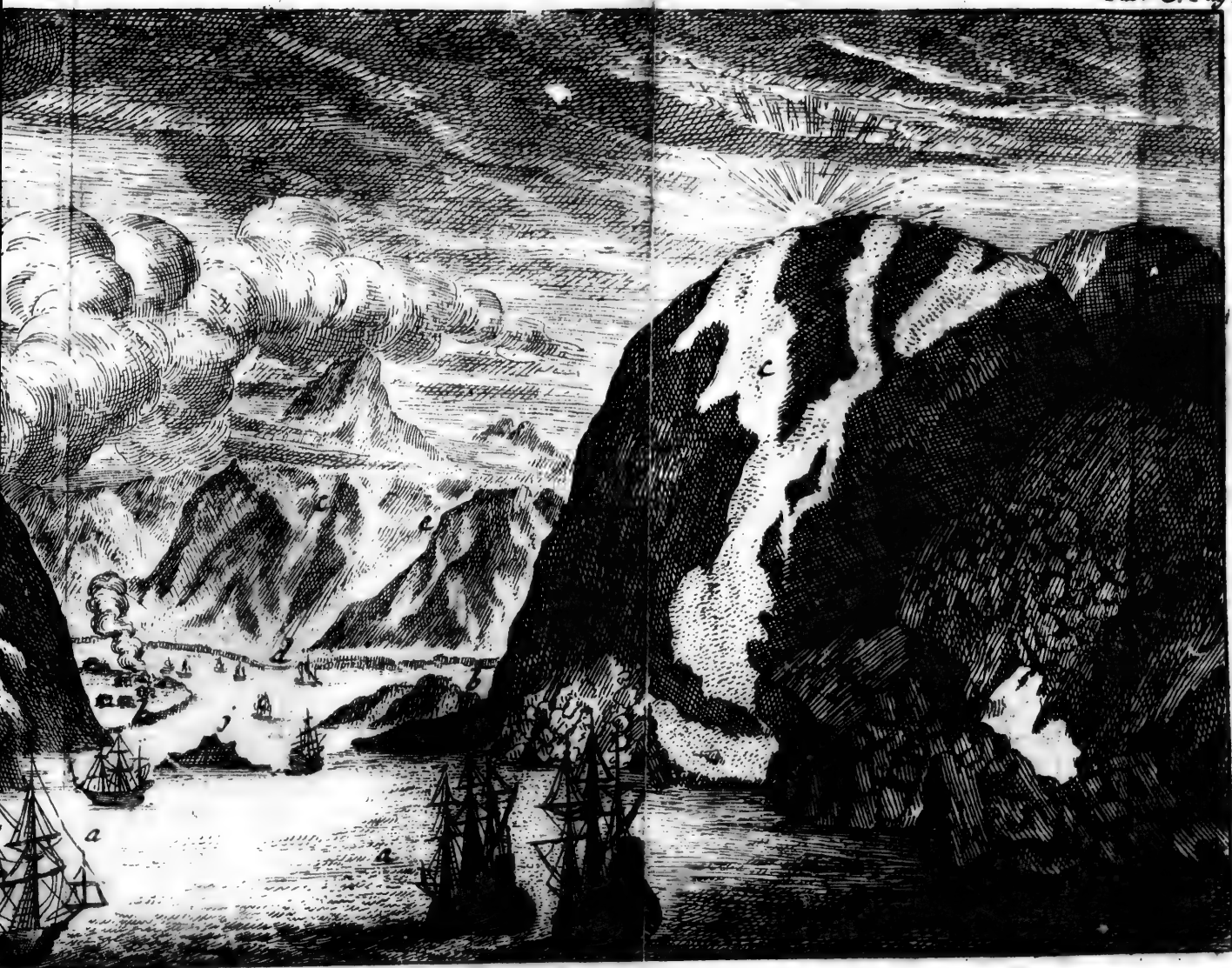
On the 13th, being *Sunday* in the morning the wind was North-west, stormy, with rain and west winds. In the night we had very clear Moon and Star-light. In the morning we saw the northern part of *Hitland*, we sailed Southward; after the Rain we saw *Fair-Ile*, and sailed in betwixt *Hitland* and *Fair-Ile*, first South-west, and afterwards South-west and South, and then Southward.

On the 20th it was fair weather, warm Sun-shine, and somewhat windy. When the day began to appear we saw *Hilgeland*, South-eastward of us, when we sailed South-east; then we took in a Pilot, on purpose chosen by the Magistrates of *Hamburgh*.



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On the 29th it was fair weather, and warm
shine all day; we sailed before the *Elbe*,
lay at Anchor by the first Buoy (called
Red-Buoy) in the afternoon we weighed
Anchor, and sailed to *Kucks-Haven*; in
night we had thunder, and lightning, and

The End of the First Part.

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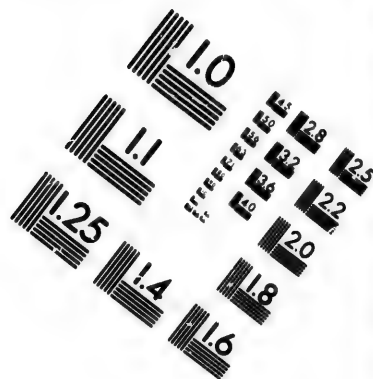
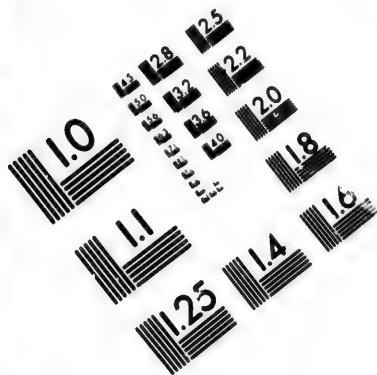
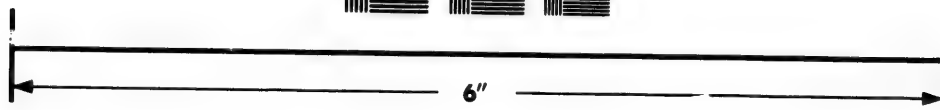
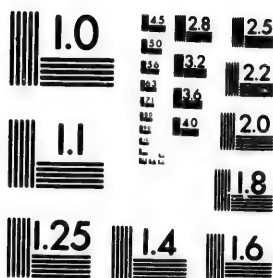


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T H E
SECOND PART
OF THE
V O Y A G E
T O
SPITZBERGEN:

Containing the
Description of SPITZBERGEN

C H A P. I.

*Of the External Face and Appearance
Spitzbergen.*

THE lowermost parts of these Countries that are called *Spitzbergen*, from the sharp and pointed Hills or Mountains, (for *Spitz* is pointed) are situated under

76 degrees and 30 minutes. We sailed to the 81st deg. and no Ship ventured farther that year; but how far this Country is extended to the North, is still unknown.

It seemeth, because the Ice stands firm, and floats not, as that in the Sea doth, that there should be Land not far behind it.

As the highest Countries are surrounded with Mountains, as a Fortification is with Walls and Works, so are these Countries naturally surrounded with high Hills.

The inward Condition of this Country we do not know, but it seemeth, since we see one Hill behind another, that it is so throughout the whole Country.

At the *Muscle-Haven*, or *Muscle-Bay*, we find plainer and leveller Ground; and the farther we sail toward the East, the Ground groweth the lower, yet it is all stony, and with prospects of smaller Hills; it doth not look at all as if it could be inhabited by Men.

I believe also that the Land there must of necessity be lower and lower; for else we should see it higher above the other, as we do the other Mountains.

Concerning the Beasts that live on this Land, I believe they come over the Ice in the Spring, when the Ice stands firm, into these Countries, and that the same way they go away from thence again, when the long nights begin.

Concerning the Birds, we have partly a good account of them, their places and food is known, as I shall mention when I come to write of them.

The Second Part of the Voyage

When on the 18th of *June*, on a *Sunday* in the forenoon, we first came to the Foreland of *Spitzbergen*; the foot of these Mountains looked like fire, and the tops of them were covered with foggs; the snow was marbel'd, and look'd as if it were boughs or branches of Trees, and gave as bright and glorious a shining or glo's to the Air of Skies, as if the Sun had shin'd.

When the Mountains look thus fiery, a hard storm generally ensues.

These Countries are in the Winter encompass'd with Ice from divers places, according as the winds blow; as if it be East from *Nor Zembla*, if North-west from *Greenland*, and the Island of *John Mayen*: it also happeneth sometimes that the Land is begirt with Ice in the Summer, as they have often seen, that go thither every year.

But when the Ice comes floating on too hard or in too great a quantity, then the Ships make to the Harbours, Havens, Bays or Rivers, as they call them, that run up into the Country; the wind useth to receive us something unkindly, when we sail into them, roaring over the dry Hills with small Whirl-winds. The water in these Rivers is salt.

We meet here with no fresh Streams or Rivers; nor did I ever see a Spring there.

Of some Rivers we know their beginning, of others it cannot be found out, because of the danger of the Ice, which they are never free from; some because of the hidden Rocks underneath the water, which are discovered by

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Sunday in the vehement breaking of the Sea, or by great quantity of white foam.

The Names of the Havens you find all in order one after another in the Map of *Spitzbergen*, as far as we have been.

These Havens they reckon to be the safest, viz. the *Safe-Harbour*, and the *South* and *North-Bay*, which are the most known of any in *Spitzbergen*.

The other Havens, of what names soever, we commonly sail by, because they lye open to the Sea.

Others we pass by because of the constant Ice that is in them, and the hidden Rocks.

In the *South* or *North-Haven* or *Bay*, ride commonly the most Ships; I told several times ten, twenty, nay thirty Ships, that lay at Anchor, as you may see in the Plates *C* and *D*, marked with *c* and *d*.

Concerning the Birds, we see abundance more of them by and on the Land, then among the Ice, chiefly when they hatch their Eggs; we do not find they make their Nest up with far-fetcht things, neither do they gather any thing for them from *Normay*, *Schetland*, or the like.

The Seeds of several Herbs might grow in *Spitzbergen*, but the Herbs nature hath bestowed on those Countries, are such as are fit for the Diseases and Distempers that are common there.

We saw abundance of *Sea-Horses* by *Spitzbergen*, on the low Land, and upon the Ice;

The Second Part of the Voyage

but we saw but very few *Seales* on the Ice there about.

The Country (as is aforesaid) is stony, quite throughout it are high Mountains and Rocks.

Below, at the feet of the Mountains, are the Hills of Ice very high, and reach to the tops of the Mountains; the Cliffs are filled with Snow; wherefore these Snow-Mountains show very strange to those that never saw them before, they appear like dry Trees with Branches and Twigs, and when the Snow falls upon them they get Leaves as it were, which soon after melt, and others come in the room of them.

There are seven large Ice-Mountains in all in these Countries, that lye between the Rocks, which look of a glorious blew colour as also is the Ice, with a great many cracks and Holes in them; they are hollowed out, melted away, and cut in Groves by the rain and fresh water that runs down; they are increased greatly by the Snow, as the other Ice that swims in the Sea is also: they are augmented likewise by the melted Snow from the Rocks, and from the Rain that falls on them.

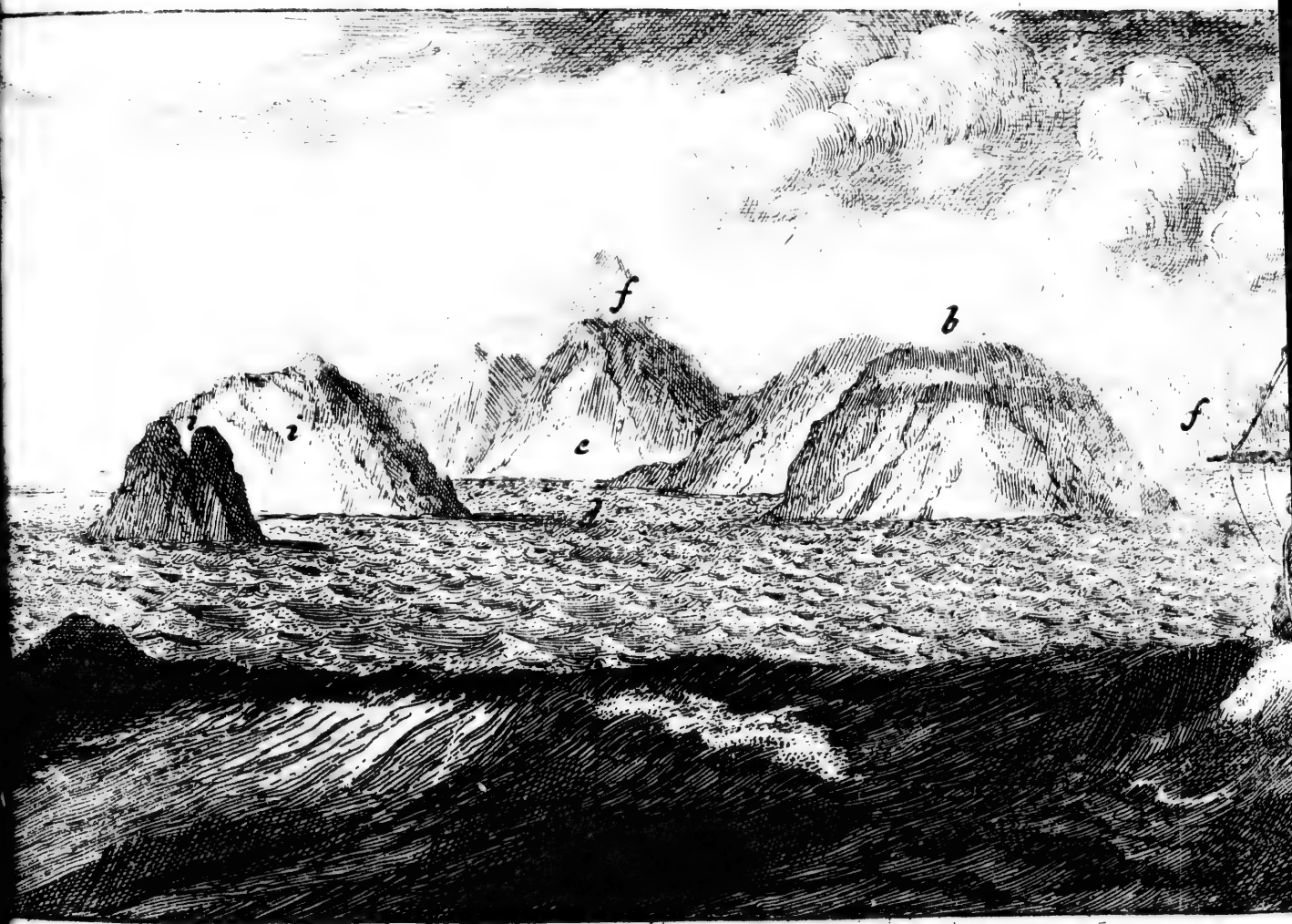
These seven Mountains of Ice are esteemed to be the highest in the Country; indeed they shewed very high as we sailed by them, underneath: the Snow look'd dark from the shade of the Skies, which shewed very neat and curiously with the blew cracks where the Ice was broken off.

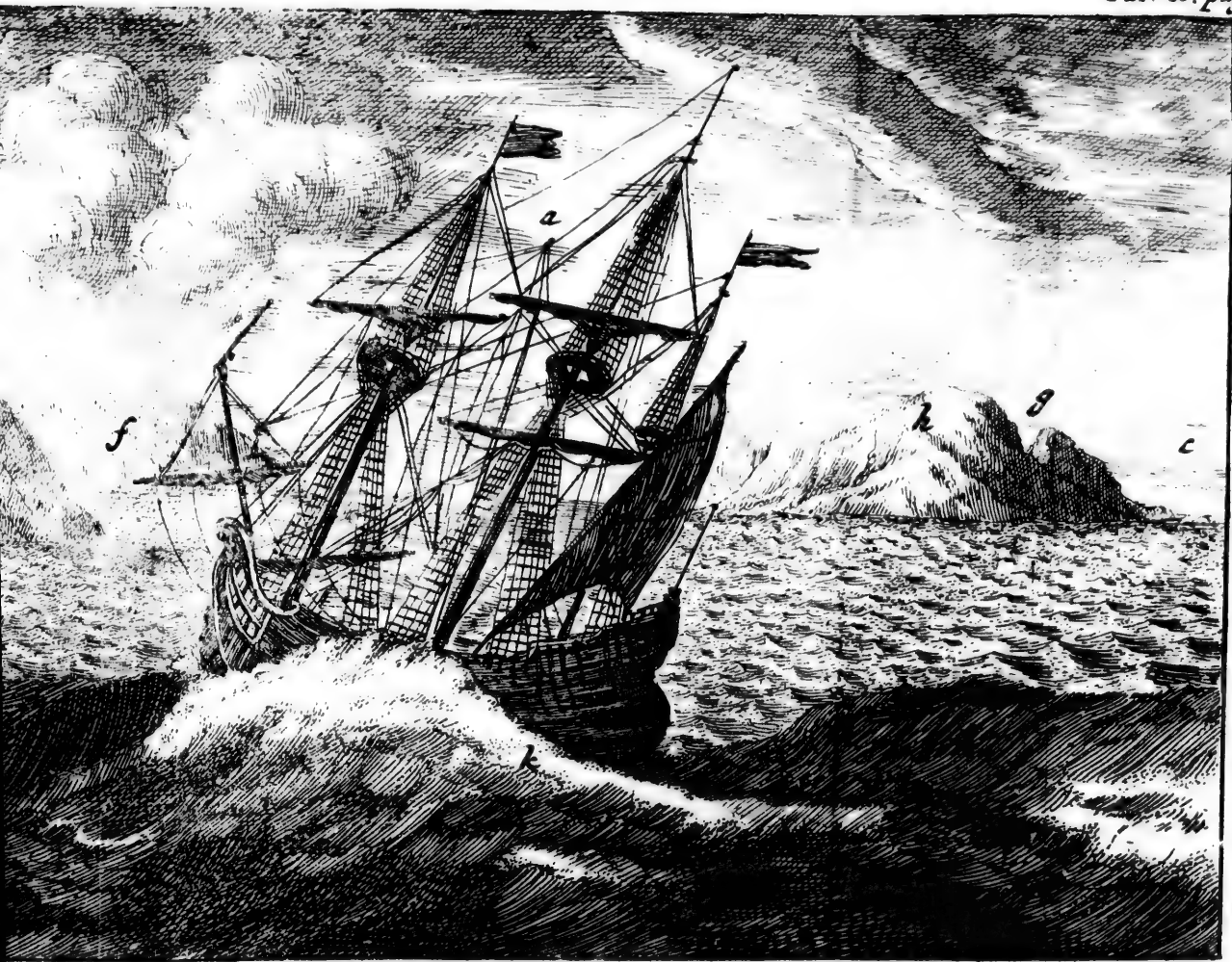
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About the middle of the Mountains some Foggy Clouds hovered over; above these the Snow was very bright.

The true Rocks look'd fiery, and the Sun shin'd pale upon them, the Snow giving the Air a bright reflection. They were covered with Clouds, so that you could scarce see the tops of them.

Some of these Rocks are but one stone from the bottom to the top, appearing like an old decayed Wall; they smell very sweet, as the green Fields do in our Country in the Spring when it rains. See *cc* in the Plate C.

The stones for the most part are vein'd differently, like Marble, with red, white and yellow: at the alteration of the weather the stones sweat, and by that means the Snow is stained or coloured; and also if it raineth much, the water runs down by the Rocks, and from thence the Snow is tinged red.

On the foot of the Mountains, where no mounts of Ice stand, lye great loose Rocks, as they chance to be fall'n one upon the other, with Caves and Holes, so that it is very ticklish walking upon them; both great and small Stones or Rocks are mixed together: these Stones are of a grey colour, or grey with black veins, they glister like Silver-oar. Most of the Rocks that are at the bottom of the Mounts are like the Pebbles we pave our Streets withal. On these Rocks grow all sorts of Herbs, Graves, and Moss very plentifully; they grow up in the two Months of *June* and *July*, from the

the Seed to bear Seed again. Look *f* in the Plate *C*.

The Herbs grow thickest where the water runs or falls down from the Hills, (and also where they are defended from the North and East winds) from whence always some Dust or Mole is carried down with it, which after a long time becomes Earth (yet it is rather Dung than a true Earth) and the Birds do contribute by their dung towards it.

These Mountains seem as if they were Earth at top by reason of the height, but when you are at the top of them, they are Rock as well at the top as the bottom, which we also see when great pieces of them fall down. If Stones are flung down from these Mountains, it sounds as if it thundered with an Echo and Ratling in the Valleys, as if very great pieces were thrown off from the top of them.

The Mountains also are full of Cracks where in the Birds make their Nests; they all fly down from the Mountains to seek their Food in the water; some eat the Carrion of Fishes, others eat small Fishes and Shrimps, as I shall say, when I treat of the Birds.

There are also White-Bears, Deer and Foxes in these Countries. The Bear liveth upon dead Whales or dead Men; the Fox feeds upon Birds and their Eggs; and the Deer eat the Herbs.

One may conjecture at the height of these Mountains by this, when the Skies are not very clear, the Mountains stand, to about the middle in the Clouds; some of them look as if they

were

were coming down every moment, as in the Plate *D* at *f*.

The reason why the lowermost Hills do not seem so high, is because so very great ones stand near them. A Ship with its Mast and Rigging, is no more to be compared with these Mountains, than a small House with a high Steeple. The Miles seem also to be very short, but when you go to walk them upon the Land, you find it quite another thing, and you will soon be tired; and also because of the roughness and sharpness of the Rocks, and for want of a Path, you will soon get warm be it never so cold: a new pair of Shoes will not last one long here.

We went in the night, when it was a very clear Sun-shine, upon one of the Rocks near the *English* Haven, about a Mile long, to look after a *Whale* that had got away from us; in the middle of this Harbour others were a rowing in their Long-Boats, which we could hardly discern: a great part fell down from one of these Mountains, which sounded very loud. The Mountains look'd black, strip'd with veins of Snow. It was so calm that we could hardly perceive any breeze of wind, and not very cold. The shoar was very full of *Sea-Horses*, which roared so that we could hear them a great way off, as if some Bulls had bellowed.

In the Country we travel thus; We take along with us two or more Guns and Lances, to resist the Highway-men the Bears, but one soon tired, as I said before, because of the stones

stones and the loose Ice, whereon it is very troublesome to walk.

As many as I have seen of these Mountains are situated thus ; The highest are from the *Foreland* to the *Muscle-Haven* (or *Muscle Bay* : after the *Foreland* follow the seven Ice Mountains which are very high Mountains ; and they are called so from the Ice-Hills that fill up the Valleys, or lye between the Rocks. These mountainous Rocks are not so sharp or pointed at the top as the two foremost Rocks at the *Haven of Magdalen* are. Then cometh the *Haven of the Hamburgers*, *Magdalen*, the *English* and *Danish* Harbour, and at last the *South-Haven*. At the *Magdalen-Haven* the Rocks lye in a round or semi circle, at each side by one another stand two high Mountains that are hollow within, as if they were dug out : After the fashion of a Breast-work, with points and cracks at the top, like Battlements ; at the bottom within the Hill, stands a Snow-hill that doth reach to the very top of the Mountain, like a Tree with branches and twigs ; the other Rocks look rudely.

In this *South-Haven* the Ships ride at Anchor between high Mountains ; on the left as we sail into it, is a Hill called the *Beehive* in the Cut *C* and *D*, marked with *g* ; called so from its resemblance of a *Beehive* : Close to it lieth a large and high Mount, called the *Devils Head* commonly covered with a fogg, and if the wind bloweth over it, it darkneth the Haven, and seemeth as if it smoaked, filling the Haven therewith.

with; on the top thereof are three small Hills covered with Snow, in the Cut C D, marked with *b*; two of them stand to one another. In the middle of this bay is an Island in the Cut C marked with *c*, which is called the *Dead-man's Island*, because they bury the dead men there after this manner; they are put into a Coffin, and covered with a cap of large stones, and notwithstanding this, they are sometimes eaten by the white bears.

We have seen no other sort of Ground but flat stones at *Spitzbergen*, so that the frost can penetrate far into such Ground. I admit that the Snow was at that time all melted away, and in the Cliffs between the great Rocks there is no more Snow to be seen, although the cracks were very deep. I fancy that abundance of rain had fallen in the Spring, and that the weather had been tolerable, or else we must have seen more Snow there.

There are also more small Islands here and there in this Harbour, that have no particular names, but are called *Birds Islands*, because we find thereupon the Eggs of Mountain Ducks and *Kirmeums*.

When you come to *Schmeremburg*, so named after *Schmer*, which signifieth grease; there are several Houses standing, formerly built by the *Dutchmen*, where they used to boil their Train-Oil. The *Dutchmen* once attempted to stay there all Winter, but they all perisht: In the Cut C marked with *k*.

It

It is observable that a dead Carcase doth not easily rot or consume ; for it has been found, that a Man buried ten years before , still remained in his perfect shape and dress ; and they could see by the Cross that was stuck upon his Grave, how long he had been buried.

These Houses are now from year to year destroyed and burnt.

This year were yet standing several Houses like a little Village, some whereof were then burnt.

Over-against *Schmerenburg* were also several Houses standing, and a Kettle or Boyler ; they call that place the *Cookery of Harlem*. This year four Houses remained, whereof two were Ware-houses, in the others they dwelt. They are built after this fashion, not very large ; there is a Stove before with a Ceiling at top, and behind a Chamber taking in the whole breadth of the House : The Ware-Houses are something larger ; therein were still several Barrels of Kardels that were quite decayed, the Ice standing in the same shape the Vessels had been of. An Anvile, Smith's Tongs, and other Tools belonging to the *Cookery*, were frozen up in the Ice. The Kettle was still standing as it was set, and the wooden Troughs stood by it. From thence you may go to the *English Haven* ; on the other side is the place where the dead are buried ; this is something even, like earth, but it is levelled on purpose. Behind these Houses are high Mountains ; if one climeth upon these, as we do on others, and doth not

mark every step with Chalk, one doth not know how to get down again. When you go up, you think it to be very easie to be done; but when you are to descend, it is very difficult and dangerous, so that many have fallen and lost their lives.

The River there is called the *South Harbour*, or *Bay*; and if the Ships suffer any damage at Sea, they refit there.

At the entry into the *South Harbour*, in the Valley between the Mountains, is collected great quantities of fresh Water from the Snow and Rain, upon the shoar stand abundance of Kardels or Barrels; we used this Water for our Victuals, and other occasions: It is also found in the Clifts of the Icy-hills on shoar; but true springs out of the Ground I never saw in *Spitzbergen*.

The shoar there is not very high, but the water is deep, there was no Ice at all to be seen in it, from whence I conclude that it had not been a severe Winter; for it is impossible that the Ice could have been melted in so short a time, not only here, but also in the *English Haven* or *Bay*, where the Ice stood firm still, and hardly lay above half a Fathom under water.

The Ice doth melt much sooner in Salt-water than in fresh River-water, but yet it is impossible that so thick Ice could have melted in so short a time. We saw also that the Snow melted on the tops of the high Rocks, and the water ran down, although it was there much colder

The Second Part of the Voyage

colder then below; yet above and below melted alike: Differently from what I observed since in *Spain* in the Month of *December* 1672 the wind being North-west, when the Rain fell below about a quarter of a League, yet above the Mountains were all covered with Snow, as in the streight Line, one not higher than the other, as if they had been levell'd.

In the *Northern Haven* or *Bay*, lyeth a very large Mountain, flat at top; this Island is called the *Birds Song*, from the great number of them that build and hatch there; for when they fly up, they make so great a noise, that one can hardly hear his own words: This is marked with *b* in the Cut *D*.

Beside these there are more *Islands* named in the Map, as the *Clefted Rock*, and such other.

The *Rehenfeld* is a low Land, and it is called so from the Deer commonly seen there.

I was informed that it is all Slat, that stands up edgewise, so that it is very troublesome to go on, it is all over-grown with Moss. There is a Hill upon it that looketh like fire.

Behind the *Rehenfeld* are high Mountains again; they are not pointed at top, they lye as it were in a Line; by the *Rehenfeld* runs up a River into the Country, and is called the *Halfmoon-Bay* from its shape. On the other side of the River is a Mountain, flat at the top, and full of crabs all filled up with Snow. Then cometh the *Liefde-Bay* (*Bay of Love*) where two Hills stand together very like unto *Spitzbergen* and *Magdalen*.

Magdalens Bay, and those two Harbours are very much like one another.

Then we come to lower Ground behind the *Masle Harbour*, where the Grass was so high, that it covered our ankles, as far as we went.

Next is the *Weighatt*, or the *Straits of Hindelopen*. The *Weighatt* is called so from the Winds, (for *weihen* signifieth blowing) because a very strong South-wind bloweth out of it. On the *Bear-Haven*, upon the Land, are all red stones.

Behind the *Weighatt* followeth the *South-west Land*, which is also low; it seemeth as if it was adorned with small Hills: Then follow the seven *Islands* which we could see.

We saw no Ships go any farther, neither could I understand that ever any Ships did go farther, nor can they go so far every year towards the East, because of the danger of the Ice that swimeth, and is brought from thence by the wind and stream.

In *May* and *June* is the best fishing in the Ice between the *Island of John Mayen* and *Spitzbergen*. In *July* and *August* the *Whales* run Eastward by *Spitzbergen*, we saw at the latter end many *Whales* that run to the *Weighatt*. It is unknown whether the Haven of this *Weighatt* goeth through the Country, or no. But this is not that *Weighatt* whereof so many things are written.

More I do not know of this Country. Rocks and Snow and Ice-hills we find in abundance here, and the Creatures that live upon them, I shall describe hereafter.

C H A P.

C H A P. II.

Of the S E A.

TH E Waves begin to raise themselves first from a small breeze of wind, and the increase and continuance of the breeze they grow longer, higher and bigger.

The Sea is not immediately made rough at the beginning of high winds, but the Waves swell by degrees and slowly, until they come to be as big as Mountains; then they expand and break themselves, and fall over with dashing and foaming, as you may see by *k* in *Cut D*.

Then the following Wave from behind reaches it again, with much curled and foaming Scum, neatly spotted with the white Foam, looking like Marble. This breaking and foaming of the Waves is successively repeated.

So the swelling Waves continually follow one another, moving before the Wind with a quick motion, but when these Waves are short, they dash over the Ship, and break much, so that the Ship is hardly able to live.

In stormy Weather little Waves curl on the top of the great ones, and lesser again upon them.

The Ships do not feel these smaller Waves but the great ones, that are called Sea-Mountains, which heave and mount the Ship with them, but nevertheless she always keeps her right way through these unpathed Waves, which are wonderful to behold.

In a hard storm the froth of the Sea drives the dust, and looketh as when the wind driveth the Snow along upon the Ice, or as the Dust of the Earth does in dry weather, and you see the Sea every where to look like curled Ice, that when it is a freezing is hindered from it by the wind, all covered with a white foam, and one wave blows over the precedent, with a great roaring and noise, as if a Water-mill were a running; and this same noise the Ships make likewise when they cut through the Sea.

It is also to be observed, that the Waves dash against one another when the wind changeth, and cross over through one another, with great crashing over the Ships, before they move all one way and the same way.

I did not observe here the Sea-water so clear, nor found it so salt as near the Ice; it may be for reason of the shallow ground or bottom, and the many fresh Rivers that run into it; or because the Frost cleareth the water more.

Concerning the manner of their Sailing; they will and change their Ways and Sails according to what they think fit. If there be a fresh Gale, they make use of all their Sails; if a storm, with the two lowermost Sails, whereof they call the first the *Fock* or *Fore-sail*, the middlemost *Schumfer* or

D

Main-Sail

The Second part of the Voyage

Main sail, and the third the *Basan* or *Mizen sail*.

In hard storms they furl the fore Sail, and leave only with the Main-Sail and the Mizen sail.

In the greatest storm of all, with these Sailes reefed or half tied in, as they call it, or with the Mizen-sail half furled up; this they do because the Ship goeth the steadier by reason of the wind, or else it would rowle too much up and down in the Sea, and the water would dash in too much on the sides thereof.

One man stands always at the Helm to steer the Ship, but in hard weather ten men can hardly hold the Helm, wherefore they fasten it with a Tackle, and so let it go too and fro, as the Compass directs them.

In and after a storm we have oftentimes strangers come to visit us in our Ships, viz. *Blackbirds*, *Starlings*, and all sorts of small Birds that have lost their way in a storm from the land, and fly to the Ships to save themselves, and prolong their lives, when others fly about till they are spent, and then fall into the Sea, and are drowned.

The *Lumbs*, and other Water-fowl, come near us; which I mention on purpose to confute the erroneous Opinion of some, that believe that the before-mentioned Birds come to the Ships as Messengers, to bring the ill news of bad weather.

Yet notwithstanding, these following signs or marks commonly fore-tell a storm or hard weather.

her, when great Fish come near to the Ships in great numbers, when they Play, Dance, rowl about, and leap out of the water, which is not always playing in them, but rather their Bodies are afflicted with some pain or other. We saw several *Whales* in the Sea, that threw themselves about as if they were Sick, or a Dying.

When the Sea is tempestuous, it is not to be thought that it doth proceed from the Sea only, but a hard and tempestuous storm and wind followeth upon it, that sendeth the Waves like Messengers before it, until it arriveth it self with tempest; but this is not to be understood of the North-sea, but only of the Sea betwixt *Holland* and *Spitzbergen*.

When the Air is so disposed, as the Stars do not only look bigger, but as if they were more in number also, it is a great Prognostication, and often proveth true also; It is a sign that the Air is full of Mist, which causeth upon hanging of the Frost, great fogs, and a high wind follows soon after.

At night, when the Sea dasheth very much, shines like fire, the Sea-men call it burning: this shining is a very bright glance, like unto the lustre of a Diamond.

But when the Sea shines vehemently in a dark night, and burns; a South or West-wind followeth after it.

At the stern of the ship, were the water is cut through, you see at night very deep under water, bubbles rise and break, then this shining or lustre is not there.

The Second Part of the Voyage

Hitherto we have discoursed of the North-sea, but next of the Waves between *Hitland* and *Spitzbergen*; near *Hitland* the stream runneth very swift toward the North, and it grows daily colder.

It is to be observed, that here the Waves of the Sea run longer, almost as they do before the narrow Channel between *England* and *France* in the *Spanish Sea*, (and what hath been observed heretofore of the rowling and tossing of the Sea belongeth properly to this) with a continual tossing of the Ships, which maketh the men Sea-sick.

The vomiting and sickness is attributed to the Sea-water; but it really proceedeth from the great and continual motion of the Body, when oftentimes we are forced to creep on all four.

Neither Meat nor Drink tastes well, the head akes and is giddy, and they are always reaching to vomit. Costiveness of the Body doth generally accompany this Distemper, and the Urine is highly tinged. I reckon it no more then if one is not used to ride in Coaches or Waggon; only that it is always accompanied with a bad stomach and restlessness.

The best Remedies for this Distemper I believe, are Aromatics chewed in ones mouth as Cinamon, Cloves, Galengal, Ginger, Nutmegs, and the like. Many think to drive this Distemper away with fasting, but they will find themselves mistaken. Some drink Sea-water, and believe that will make them vo-

mit, which notwithstanding is not occasioned by the Sea-water, but by the loathsomeness thereof.

To take away the ill taste out of ones Mouth, in my Opinion, the best means is to Eat and Drink Plentifully, it easeth quickly ; neither ought one to Sleep too much, but keep in the Air, and look into the Wind, and to walk up and down in the Ship is also very proper.

But now let us return to the Waves again, they Rise, although it be not Windy, as high as Mountains very smooth, and run away as far as one can discern them, which is to be understood when the Sea is turbulent, whereupon quickly a hard Gale of Wind followeth. In a storm the Waves run after the same manner, as I just now said, but with many curling and roaring whirls, as is described in the storm of the North-sea. These Waves run a great way, so that you may see between them at a great distance.

If any Ships be in your Company, oftentimes you cannot see them.

These Waves are a great deal larger then in the North-sea, and have also greater power when they fall over, but do not dash so easily over the Ships as they do in the North-sea. The Waves in the North-sea are presently lay'd over a storm, but the commotion of these lasts often to the third day ; if it be never so calm, the Ships are moved very violently, that you cannot walk, sit, or lie ; it is best to keep

in the middle of the Ship, for before and behind the Sea beats hard against them. The Sails are driven against the Mast, and have no steadiness from the Wind. If in a brisk Gale or full Wind the Sails are all full and Round, the Ship sails best upon the Sea.

There is as great difference in Ships, as Sailing, as there is in Horses, concerning swiftness and swiftness; the motion of the Ship is therefore different; the stillness and quietness, when nothing is tumbled up and down in the Ship, furthereth also sailing very much.

The Ships swim something higher in the Sea than they do in Fresh-water; for there is almost a foot difference in a Ship with the full loading. 'Tis generally agreed upon, that you may see a Ship in a calm Sea three, or three and a half *German* Miles off, and beyond that distance the Sea loseth it self in the Air, as the Air in the Sea. If a Ship saileth on the main Sea at one and half *German* Miles distance you have lost the sight of half the Ship: at two Miles you see only the uppermost Mast: at three Miles distance you see only the Flag: and when it goeth farther, you have quite lost it.

Land and Mountains may be seen at a great distance at Sea; we saw *Spitzbergen* at twelve Miles distance off at Sea; the Country looked like a black Cloud full of white stroaks, as is the Cut *D* marked with *a, b, c, g, h, i*. Near the Ice of this Sea it is coldest where the

fore and be quiet; and the Sea-water is so clear, that twelve and more Fathoms deep you may see the bottom. There is no ground to be found near the Ice to drop an Anchor.

It is also to be observed, that according to the colour of the Skies, the colour of the Sea is changed. If the Skies be clear, the Sea looks as blew as a Saphir; if it is covered somewhat with Clouds, the Sea is as green as an Emerald; if there be a foggy Sun-shine, it looks yellow; if it be quite dark, like unto the colour of *Indico*; in stormy and cloudy weather, like black Sope, or exactly like unto the colour of black Lead.

If the Wind be quite Calm, one may hear beating or knocking at a great distance on the sea, by which we also observe the *Whale* hears, as shall be mentioned in its proper place.

Among the Ice the stream runs Southwards, which we observed by our driving back a great way. At the *Muscle-Haven* the stream ran Northwards. Those that Sail Yearly to those places, cannot give any certain information concerning ebbing and flowing; only they have observed the water to be higher about the Land, when the winds have been higher then at other times. And this I have also observed, that if there was an orderly or continual ebbing and flowing, the Eggs of the Birds would be drowned upon the Islands.

Certain information, concerning the ebbing and flowing, is not easily to be had, I know no more of it then what I have written.

CHAP. III.

Of the I C E.

IN the Months of *April* and *May* the Ice breaks, because it lyeth Westward, which drives disperd in the Sea, by the Island of *Joh Mayen*, and reacheth to *Spitzbergen*, where at that time it was firm still, as you may see in the Plate *A* marked with *e*.

The difference between the Ice of *Spitzbergen* and that of our Country, is, that it is not smooth there, so as to slide upon it.

Neither is it so clear nor transparent, nor so sharp and cutting, but a great deal harder, and not easily broke or split; but it looketh likest unto the Ground Ice of the Rivers in our Country or like unto Loaf-sugar.

Where the Ice is fixed upon the Sea, you see a snow-white brightness in the Skies, as if the Sun shined, for the Snow is reflected by the Air just as a Fire by Night is; but at a distance you see the Air blew or blackish: Where there is many small Ice-fields, that are as the Meadows for the *Seales*, you see no lustre or brightness of the Skies.

The Sea dasheth against these Ice-fields, which occasioneth several fine Figures; not that they are naturally framed so, but just as Ice flowers on our Glafs-windows, get all sorts of figures; for these are framed by the dashing of the Sea, like unto Mountains, Steeples, Tables, Chappels, and all sorts of Beasts.

These Ice-fields are a great deal deeper under Water, then they are high above it, and are of a paler colour under Water than above; the top of them might be called the Kernel and Marrow of the Ice, because the colour is much deeper then that of the other.

The highest colour is delicate Blew, of the same colour with the Blewest Vitriol, somewhat more transparent, yet not so clear as that in our Country, which you may see through, let it be never so thick; it is as hard as a stone, and it is not easily split or cleav'd, because it is spungy, like unto a Pumice stone. Among this Ice the Ships sail up and down, until they come to bigger Ice-fields, for the small ones encumber the Sea, that the Ships sail often against them and perish, for when the winds rise the Waves drive against the Ice-fields, as if it was against Rocks, and beat the Ships to pieces.

When we are passed by these small Ice-fields that swim at a great distance from one another, then we sail in between them, and draw a small Ice-field behind the stern of our ship, that it may be the sooner stopt, and kept from swift Sailing, without letting the Sails-strike,

The Second part of the Voyage

Sails strike, for else it might easily run against an Ice-field. Every Ship's master is left to his free will, whether he will sail into the Ice, because in the Spring the *Whales* are in great numbers seen there in the *West Ice*, as they call it.

The Masters do not willingly sail in amongst the Ice, when it is dark, or foggy, or stormy, which must be expected in the Spring, and the small sheets of Ice swim up and down in the Sea, which the Skippers must avoid, lest they lose their Ships.

It may seem something strange, that they sail so often to the Ice and back again, but there is the same reason for it as in hunting after Deer, if we do not find *Whales* in one place we must seek them in others; for the fortune in ketching of *Whales* is like the Chances of Gaming, and there is no great understanding required to find them: some see and catch more than they desire, and others but at half a mile distance from them, see not one, which is very common.

When they go in amongst the Ice, the Men stand ready with great Ice-hooks to keep them off, that the Ship may not run against them.

The farther you sail into, and amongst the Ice, the greater Ice-fields you shall see, so that you cannot look over them; for about the *West*, as they call it, are larger Ice-fields to be seen than about *Spitzbergen*, quite white at the Top, covered with Snow, so that there is but

run againſt the Ice, be-
re in great danger as they call
in amongſt the Ice, or ſtormy weather, and the Ice is broken down in the Ice, leſt they

all walking upon them, becauſe you fall deep into the Snow. (See *A* marked with *l*, and *B* marked *c*.)
The prints of the *Bears* ſooting we ſaw on the ſhoar of the Ice-fields, for they ſeek their Prey in the water, which is the dead Carcaſes of the *Whales*, the *Foxes* generally accompany them, for their choicer food of Birds is here ſcarcer than at *Spitzbergen*, for they flock not together, but fly ſingly.

When they ſail ſome Miles into the Ice, where there is pretty large Ice-fields, they joyn their Ships to them with great Ice-hooks, faſt- ned to ſtrong Cables, where they lie at Anchor, ſeveral Ships about the ſame Ice-field, but they rather choſe to be alone, becauſe they are an hindrance to one another in *Whale*-catching, and the hunting of them from one to another maketh them ſhie.

Amongſt the Ice we find no great Waves, but it is pretty ſmooth, even when it is ſome- what ſtormy. All the danger is from one Ice- field being bigger then the other, and the little ones ſwimming faſter than the great ones, which often cauſeth a ſtoppage, ſo that they crowd upon one another, not without great danger of the Ships, which are often caught between, and broken by them. See the Plate *B* at *a*.

The Seamen hinder the preſſing on of the Ice as much as in them lieth, with great Ice-hooks; but what ſmall help this affordeth them daily experience teſtifies ſufficiently. In fair weather the

the mischief is as soon done as in tempestuous because the Ice drives in the Sea either with the stream or wind, as either of them is the more prevalent, crashing and grinding against each other whence the danger arises to the Ships, for after such a manner many Ships perish. See Plate B.

They say that a dead *Whale* tied to the Ship is the best defence against the Ice. Others hang the Tails and Fins about their Ship, which way is not to be rejected, for it is of great use to them to prevent the danger of the squeezing of the Ice; they have examples, that in such squeezing of the Ice a dead *Whale* hath preserved them.

The Ice rises out of the Sea as high as a Mountain; the striking of them together makes so great a noise, that one can hardly hear his own words; and from this joining together of the Ice, the great Ice-hills are made, that drive up and down in the Sea.

Other great Ice fields are not so high as the Ice hills, yet notwithstanding they are hardly ever quite plain, and without a Hill; you see the Ice under water as deep as you can see. It is all of a blew colour, but the deeper you look the purer blew you see; which beautiful colour changes with the Air, for if it be rainy weather this colour groweth paler. I also have often seen the Ice underneath the water very green the occasion whereof was the troubled Air whence the Sea assumeth this colour.

I wonder that upon the largest Ice-fields
so high Mountains are seen, as are seen where
the Ice grinds and dashes one against the o-
ther.

I am of opinion, that the Ice melts to-
wards the bottoms, for one may see it spongy;
or else, if one would compute from the
beginning, it must have reached the very
ground, even in the middle of the depth of the
Sea.

I have seen in *Spitzbergen* white Ice that
is frozen quite curled, it look'd just like Su-
gar-candy, was very hard and thick, and
came even with the Seas surface. The Ships
are not always in this danger of Squeezing,
for oftentimes there is little or no Ice to be
seen there, although you are a great way in
the place where it usually is; but as soon as a
land arises, you would admire from whence so
great a quantity of Ice should come in less than
a few hours time.

At the greatest Ice-fields of all, Ships do not
always ride the safest; since by reason of the
thickness and the motion of the Sea, these Ice-
fields break, not without danger.

When such Ice-fields break they part asunder,
which causeth a Whirl-pool in the Sea, where
the out-parts press to the Center, and by
that means the pieces of the Ice-fields raise
themselves up, and dash and grind against each
other.

When we came to 71 degrees in the Month of
April we saw the first Ice, and so we sailed up
and

and down by the Ice, until that Month was spent, for so early in the Year no body dares venture himself into or amongst the Ice, by reason of the stormy winds; and sometime the Ice is still fixed, and stands firm, and therefore there is but a few *Whales* seen, for underneath the Ice they cannot breathe.

Into the Ice we sailed at 77 degrees and 2 minutes, and drove with that sheet of Ice towards the South. In this Month, and also in the following Month of *May*, are the most *Whales* seen here, which run towards the East and we follow them all along by the Ice to *Spitzbergen*.

Near to the Land smaller Ice-fields are seen because the Ice cannot give way by reason of the Land, which causeth greater grinding and breaking, and upon that account smaller Ice than is in the open Sea. Yet for all this, some greater Ice-Mountains are seen there, that stand firm on the shoar, and never melt at bottom but increase every year higher and higher, by reason of the Snow that falls on them, and then Rains that freezes, and then Snow again alternately; and after this manner the Icy-hills increase yearly, and are never melted by the heat of the Sun at the Top. These Ice-Mountains change their first colour in time by the Air, by Rain and by the Clouds; and the fairest blue that can be, is seen in the cracks of these Ice-hills. From these same Ice-hills, oftentimes break out great pieces, that swim in the Sea, and is more compact than the other Ice by far. I once saw

Month was one of these pieces that was curiously workt
body dare and carved, as it were, by the Sea, like a
the Ice, but Church with arched Windows and Pillars, the
and sometimes Doors and Windows hung full of Icicles, on
, and there the inside thereof I saw the delicatest blew that
for under can be imagined; it was bigger than our Ship,
and somewhat higher than our Stern, but how
deep it was under water, I cannot exactly tell.
rees and a deep unto the *Muscle-Haven*, a great Ice-hill
et of Ice to me driving towards our Ship, that was as
and also in high as our Poop, and went so deep under wa-
are the most er, that it took up our Anchor, which lay fif-
wards the East-ten Fathoms deep. I have also seen several
y the Ice to others, and of other figures, *viz.* round and
elds are seen oursquare Tables, with round and blew Pil-
by reason of ars underneath, as in Plate *B* marked with *f*:
grinding and he Table was very smooth and plain at the top,
t smaller Ice and white with the Snow; at the sides hung
all this, some down a great many Icicles close to one another,
e, that stand like a fringed Table-cloth; I believe that near
it at bottom forty Men might have sat about it. I have seen
d higher, but of these Tables with one Foot, and with two
a them, and r three Pillars, and abundance of *Seales* swam
Snow again bout it. The Dishes that furnished this Table,
the Icy-hill were a piece of Ice like an Horses Head, and a
elted by the swan, I doubt they were but salt. You must
e Ice-Mount observe that this Ice becometh very spongy by
y the Air, but the dashing of the Sea, and from thence grows
e fairest blew salt, like Sea-water, and thence also changeth
these Ice-hills colour, *viz.* from the Sea and Rain-water
mes break o mixt with it; for you shall commonly see the
and is more Water look blew or yellow, if you walk under
I once saw water, with your Eyes open, and look upwards.

The

The Second part of the Voyage

The other Ice, as far as it is above water, is of a taste like other Ice, but that below the Sea is salt like the Sea-water.

When we arrived at *Spitzbergen*, the Ice at *Rehenfelt* was as yet fixed, but a few days afterwards it was driven away by the Winds.

The Ice begins these Countries on all sides as the Wind sets either from the *Island of Juk Mayen*, *Old Greenland*, and *Nova Zembla*. We found at this time that the Ice reached from the other side of *Spitzbergen*, and the Ships sailed between the Ice and the Land, as if it were in a River.

As soon as this Ice is drove thither by the winds, the Ships must give way, or go into the Harbour, until the Winds have blown or driven the Ice away, or else they are lost; but if there be other Ships that escape, the Men are saved.

On this Ice I did not see many *Sea-Horses*, but a great many *Sea-Horses*, and many Birds and Fowl.

We sailed still on till we saw the *Seven Islands* but could go no farther.

C H A P. IV.

Of the AIR.

THE Frost is unconstant in our Country but it is not so in *Spitzbergen*. In the Month of *April*, at 71 degrees, it was so cold that we could hardly keep warmth within us. They say that in this Month, as also in *May*, the hardest Frosts happen every year.

All the Rigging, by reason of its being wet, covered over with Ice, and stiff.

They do not send their Ships so soon as they did a few years ago, and yet they come time enough there, for if they arrive too early, there is nothing for them to do, because the Ice is yet dissipated, and therefore but few *Whales* be seen.

In the two first Summer Months of *Spitzbergen*, their Teeth chatter in their Heads commonly, and the Appetite is greater than in any other countries.

The Sun sets no more after the third day of *May*, and we were about 71 degrees, when we could see as well by Night as by day.

CH cannot say much of constancy of the weather in these two first Months, for it changes daily. They say also, if the Moon appears cloudy and misty, with a streaky Sky, that
E then

then there commonly follows a storm. Whether the Moon doth prognosticate such storms I cannot tell, because we have observed, that after we have seen the Moon, in a clear Sky the Air has grown foggy, which happeneth often, chiefly if the wind changes. When the Hills show fiery, it is from Fogs, which after spread themselves every where, and the Cold encreaseth: These Fogs look blew, like *Indians* and black afar off, which upon changing of the Weather are driven along by the wind, so that in less than half an hour the Sea is so covered with a thick Fogg, that you can hardly see from one end of the Ship to the other.

On the 14th of *May* the Air was bright and clear, and yet very cold; we could see the *Whales* farther off in the Sea, then usually at this time: We could not distinguish the Land from the Sea, for it shewed as if the Ships danced in the Air like naked Trees or Poles.

After the same manner *Spitzbergen* looks at a distance like a Cloud; the Mountains are so reflected by the Sea, that he that knows not the Country very well, cannot easily discern it from the Air; and so other Countries very often appear. The other three Months, *June*, *July* and *August*, were very calm.

Concerning the Cold, it is much according to the quality of the Winds; so North and East winds cause very intense Frosts; so that one can hardly keep alive, especially if the wind blows hard.

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N^o 1.

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N^o 2.

B 



N^o 3.

C 



N^o 4.

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N^o 5.

E



N^o 6.

F *



West and South winds, when somewhat constant, cause much Snow, and sometimes Rain also, and moderate cold.

The other winds of the 32, according to the Compass, whatever names they have, are changed by the Clouds, so that sometimes when the wind was South-west and by South in one place, at a few Miles distance, there blows quite another wind.

What heat the Sun oftentimes affords we saw by our Eyes watering, and the tears that ran continually down our Cheeks. Yet this severe Cold is not always, as is already mentioned, for if it were, how could any Herbs grow there.

Neither is there every year a constancy of winds or weather ruled by the Moon, but an alteration, as is in other places, sometimes a milder, and sometimes a severer Winter.

Skilful Ship-masters and Harponeers, commend those years for *Whale* catching, that have not many foggy and cloudy days.

Whether, according to the New and full Moons, the Spring-tydes happen, cannot be known.

Such clear Skies as we have sometimes in a Summers day, with pleasant curled Clouds, I have not seen at *Spitzbergen*; but on the contrary, several dark and foggy ones. Rising Thunder-clouds I have not seen, nor ever heard of any body that had seen them.

Above the Ice the Air appears white, from whence we know where the firm or fixed Ice

The Second Part of the Voyage

lies, as I have before observed in the Chapter of the Ice.

In the two last Summer Months, chiefly in *July*, before the *Weighbatt*, the Sun shin'd so warm, that the Tarr of the Ship between the Seames, where the wind could not come at it, melted.

There is hardly any difference of Cold between Night and Day, yet at Night when the Sun shineth, it seemeth to one that rightly considereth it, as if it was only clear Moonlight, so that you may look upon the Sun, as well as you can upon the Moon; so that thereby one may distinguish Night and Day from each other. Increase of Cold, and changing of the Compass, we did not observe as far as we went.

It is also to be observed, that the Frost doth not let a dead Body be consumed easily in the Ground, as is already observed, in the Chapter of the Description of *Spitzbergen*.

The second day of *August*, in our Voyage homeward, we observed the Sun first to set.

Concerning the Meteors generated in the Air, I observed that the *Rime* fell down in the shape of small Needles of Snow into the Sea, and covered it as if it was sprinkled all over with Dust: these small Needles increased more and more, and lay as they fell cross one over the other, and looked very like a Cobweb; they are form'd by the cold of the Air, and increased to that degree, that the Sea seemed covered by them, as with a Skin, or a tender

Ice,

Ice, which had the taste of Fresh-water; as also the Sea-water that is taken up into the high Air is changed, and falleth down again in sweet or fresh Rain.

This hapneth in clear Sun-shine and intense cold weather, and it falleth down as the Dew doth with us at Night invisibly, in dull weather; when the Sun doth not shine, you cannot see this; but you see it plainly, if you look when the Sun shines towards a shady place; for then it sparkles as bright as Diamonds; shews like the Atoms in Sun-shine, all day long it falleth in so small Particles, that nothing sticks or hangs on your Cloaths of it make them wet.

At Noon when the Sun shines very warm, these small Needles melt in the Air, and fall down insensibly like Dew.

Sometimes we see in our Country, something a little like these small Needles, which is what we call Rime, and falleth from the Trees in Atoms like Dust. This is small Snow, and may be seen as well in the Shade as in the Sun. These Needles are not the Exhalation or Vapour that rises in cold weather, to stick to the Hair of Men and Beasts. I must not forget, that we see in these falling Needles a Bow like a Rain-bow of two colours, white and a pale yellow, like the Sun, reflected by the dark Shadows of the Clouds.

After this I proceed to the Description of another Bow, which I call a Sea-bow. This is seen when the Sun shines clear and bright,

not in the great Waves, but in the Atmosphere of the Sea-water, which the Wind blows up, and which looks like a Fog. Commonly we see this before the Ship, and sometimes also behind to the Lee-ward (so they call that side of the Ship towards the Sea) over-against the Sun, where the Shadow of the Sail falleth. It is not the Shadow of the Sail, but a Bow sheweth itself in the Shadow of the Sail. We see this pleasant reflexion, in the small drops of the Salt-water of several colours, like the Rain-bows in the Skies, that are seen over-against the dark Clouds.

This brings to my Mind another Phænomenon, *viz.* that in the Clouds near the Sun, a very bright Light is seen, like a Perelion or Mock-sun. These Lights are called Weather-galls by the Sea-men.

This bright Light we find in the lower-moist Air, in the dark shady Clouds, that are not unlike to a Cloud of Rain, because it is full of drops, wherein the Sun is represented, as things are in a Looking-glass.

This clearness of the Sun causeth a Heat, which drives from it a Rain-bow, figured by the Sun, which bow are the Drops that by the Heat of the Sun are changed into a Vapour or Fog, and this Vapour shews like smoak in the Air, when the Cold remits, wherein these Colours are no more seen.

But in these raised Drops, as aforesaid, the Sun represents it self, and causeth these Colours, which are truly distinct, and represent

Blew

Blew, Yellow and Red; which are the three primary Colours of the Bow.

Concerning the bigness thereof, I did consider and minded the Bow that I saw in *Spitzbergen*, and found that it moved about with the Sun by Day and by Night, and that it appeared much bigger in the Morning, Evening and at Night, than in the Day-time.

I will not mention the Whirlwinds which are unknown in these cold Countries; that used to take up the Water into the Air: But yet I will not omit the small Whirlwinds, that proceed from the high Mountains, from whence the Wind recoils, and so turneth round about.

We see farther in *Spitzbergen*, that the Sea as well as the other Waters, sends forth a Vapour, when the Cold encreases, which Vapour is turned into Rain in the Air, or into Snow, and it smelleth like a Fog or steaming Water.

It is likewise an Observation there, that when we see great Vapours or Fogs in the Air, and that such a Vapour riseth almost every moment in a clear Sun-shiny Day, without Wind or other Causes, the cold Weather is about to remit: But when the Air is overburdened by these Vapours, the Clouds are dissipated, and they last a great while with constant Wind. Such Vapours as we see in the Air, stick to our Cloaths and Hair like Sweat.

Out of these small vaporous Drops the Snow is first generated: First of all you see a small

Drop, as big as a single Sand in the Plate marked with *A*. This is augmented or increased by the Fog, until it cometh to be like unto a Shield or Plate with six corners as clear and transparent as Glafs, to these six corners sticks the Fog like Drops, as *B*. then it freezes and splits asunder, so that you see the Figure of a Star, as *C*. which yet is still frozen together until in time it is quite parted or divided asunder one from the other, and then you see a Star with six Points, as *D*. which Points are not yet quite frozen, because there are still hanging some wet drops between the Points until at length it assumes the perfect Form of a Star, with Points ferrated at the sides, like Ferne, on the Points whereof still hang some Drops, as you see at *E*, which are lost at last and so it is turned into an exact and perfect Star: And this is the Formation of the snowy Star, which is seen in the severest Frost so long until at last it looseth all its Points. See *E*. as to the many sorts of Snow that fall in *Spitzbergen*, and in what Weather I have made these following Observations and Distinctions, Number 1. in the Plate of *E*. sheweth the Snow that falleth, when it is tolerable cold and rainy withal, then it falls like unto small Roses, Needles and small Corns. When the cold Weather doth remit the Snow falleth like Stars, with many points like the Leaves of Ferne. Plate *E*. Numb. 2. If it be only a Fog, and it snoweth much, it looketh as you see Numb. 3. If it is very cold and windy like Numb.

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Numb. 4. When it is very cold and not windy withal, the Snow falleth like unto the Stars in a cluster, because the Wind cannot blow them asunder, like Numb. 5. When the VVind was *North-West*, or the Skies were thick of Clouds, and it was stormy withal, there fell Hail that was round and oblong all over full of prickels, and of the same bigness as you see it a Number 6.

There is many more sorts of starry Snow to be seen, with more Points, and some like unto a Heart, but they are all generated after the same manner, by the Eastern and Northern Winds. The needly Snow is generated by Westerly and Southerly Winds: If the Snow is not dispersed by the Wind, it falleth down in clusters.

But when the Wind driveth it, Stars or Needles only fall, every piece by it self, like the Atoms in the Sun.

Thus much have I observed hitherto of the Snow, and find that also when it is cold and a North Wind blows, all sorts of Snow, both starry and of other shapes, fall as well in these Countries as in *Spitzbergen*.

The End of the Second Part.

THE
THIRD PART
OF THE
VOYAGE
TO
SPITZBERGEN:

CHAP. I.

Of the Plants of Spitzbergen.

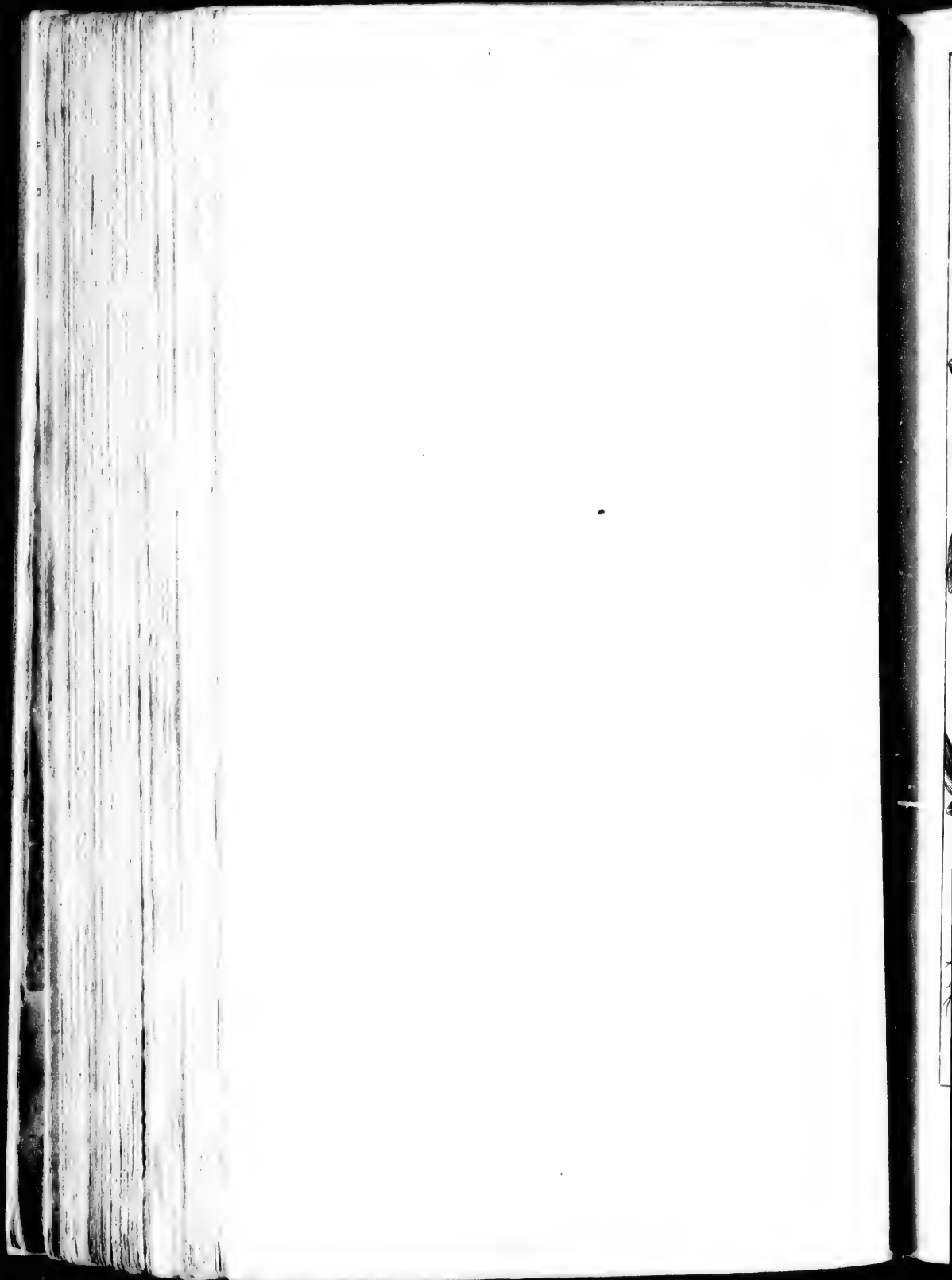
Generally the Figures of the Plants I have present you with, were all drawn by the Life upon the place when they were fresh, and of their natural size, except the Rock-plant with but one Leaf, and the Plant like Horsetail, that stands by it, which because of the largeness could not be well drawn so big as the



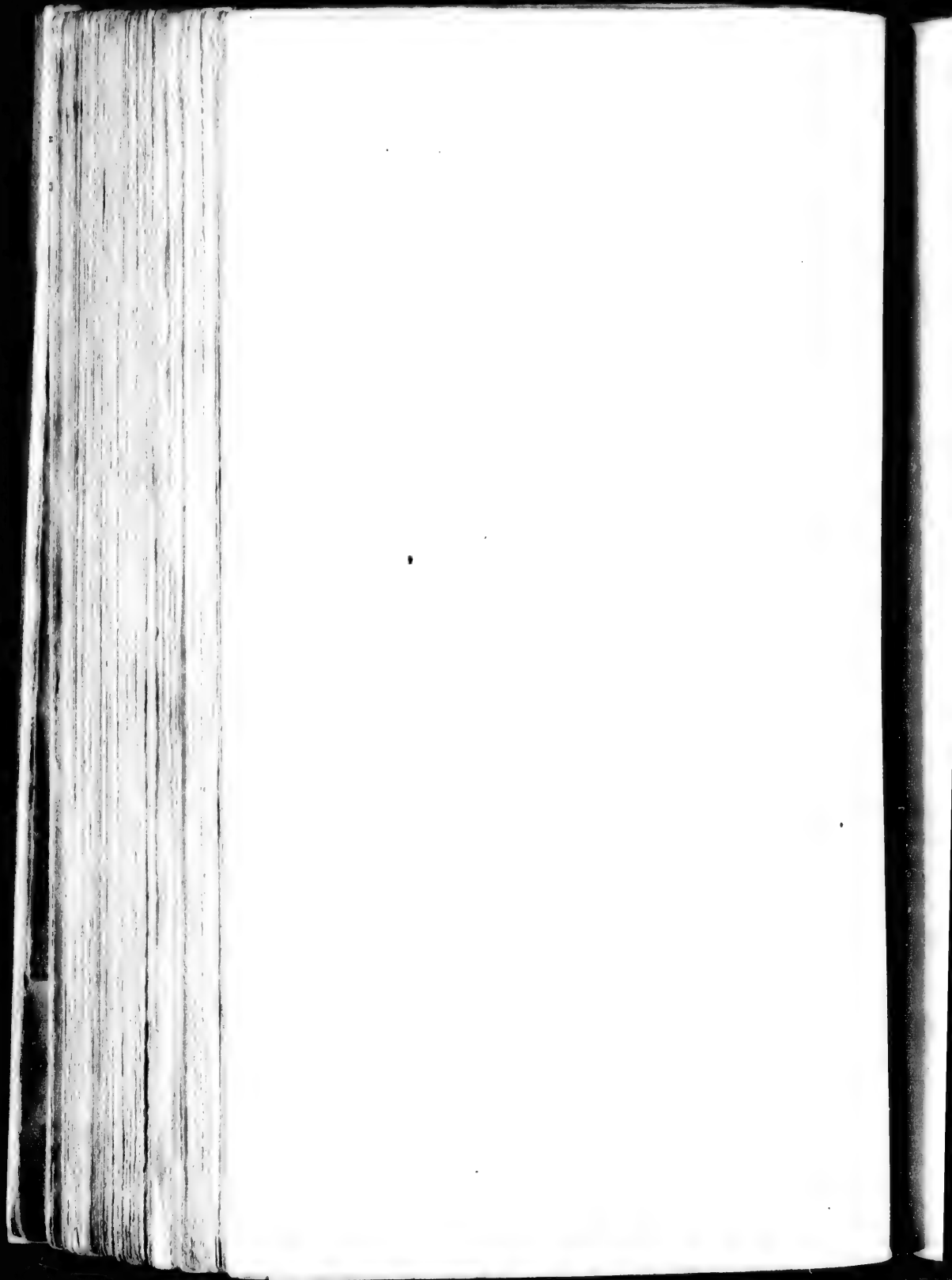
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Life. All the Herbs and the Mosses grow on the Grit and Sand of the Stones, where Water falleth down, and on that side of the which the East and North Winds cannot come at. The Plants owe much of their growth to the Dung of the Birds.

There were a great many small Herbs, which want of time I could not delineate, but I propose to do it hereafter, if God blest me with Life and Health, when I make my second voyage thither.

I omitted the white Poppy, whereof we stuck Flowers in our Hats; the whole Plant was about a Span long.

Besides I have not mentioned the *Red Sorrel*, I mean that which was shewed to me at *Bremen* by the *Dutch Gardener*, which was of the same kind, but the Leaves of that of *Spitzbergen* are red.

I desire the courteous Reader to accept at present of these for Sample, to shew him that these rough, barren and cold Mountains, yet grow some Plants, for the Nourishment both of Man and Beast. The Herbs grow to their perfection in a short time, for in *June*, when we first arrived at *Spitzbergen*, we saw very little Green, and yet in *July* most of them were in flower, and some of them had their Seeds already ripe, whence we may observe the length of their Summer.

I proceed to the Description of those Plants, which I had time to delineate, and begin with those, that put forth their Leaves only at, and about



about their Roots, and have but few or no Leaves on their Stalks.

Then shall follow those that have single Leaves on their Stalks; then those that have pairs of Leaves or opposite ones, afterwards those with three Leaves, and then conclude with the imperfect Plants.

C H A P. II.

Of a Plant with Aloe-Leaves.

IT is a very pretty Herb, and puts forth thick, prickly and sad green Leaves like those of Aloes, a brown naked Stalk, about half the length of your Finger, whereon hang round Heads of Flesh-coloured Flowers in Bunches, which are hardly to be discerned by the naked Eye, one Flower close above another and near to one another Tab. G. marked with *a.*

Sometimes two Stalks shoot out of one Plant one bigger than the other. Yet each Stalk has two of these Bunches of Flowers.

I could not delineate its Seed for want of time. The Root consists of many small Fibers.

We gathered it in great plenty on the 17th of July, behind the Cookery of *Harlem*, in the running Water.

I know not well, to what kind this may be referred. *Caspar Bauhin* maketh mention of an herb in his *Prodromus* of his *Amphitheater* of plants in the 5th. Book and 15th. Chapter, which he calls *Limonium Maritimum*, which he describes with small, roundish and thick Leaves, like House-leek, between which spread forth small stalks with pale red Flowers; but the Root doth not agree with our Plant, for his is long, red and parted at top, whereas this Root consists in many small Fibers, and is not red.

C H A P. III.

Of small House-leek.

THE Leaves of this are indented and very like those of our Daisies, for which I should have taken it also, had it not been for the Flowers, only the Leaves are thicker and more juicy, like those of House-leek, or, as we call it, those of the lesser House-leek: The Leaves grow round about the Root, betwixt them is a small stalk of the length of your little Finger, which is round and hairy, and generally without Leaves, save only where it divides into another stalk, at which place is a small Leaf.

The Flowers grow in scaley Heads (like unto the Flowers of *Stachas*) are of a brown colour, and have five pointed Leaves, as I think with

The Third Part of the Voyage

with five small Chives within, like unto the Flowers of Wall-pepper or Stone crop. I found only the Flowers, for the Seed was not ripe. The Root is somewhat thick and starchy with many strong and thick Fibers from the sides of it; it may be referred to the House-leeks, and called small indented or crenate House-leek, with scaly Heads.

This Plant I found in the *Danish* Harbour Bay on the 18th. of July, it is figured in Tab. F. at a.

C H A P. IV.

Of Crows-foot.

SOME of these Plants are figured in the Tab. G at c and e, and the Tab. H at c, and the Tab. I at d.

These four following Plants are all Crows-foot, only distinguished by their Leaves.

The first and fourth in Tab. G at c, and Tab. I at d, are very like one another as to their Leaves, whereof they have both sorts, the undermost broader, and not so much cut, and the uppermost smaller and deeper divided, yet they differ in this, that the first doth not grow so high, and puts out many Leaves out of one and the same Root, but the fourth in Tab. I at d, hath but one long Stem where

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Tab. I. pag. 62.



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whereon sprouted out one single Leaf at a place. The fourth hath yellow Flowers, but whether the first hath yellow ones (which I suppose) I cannot well remember. The Flowers of the fourth hath five Leaves, broader at the ends and smaller at the bottom, they grow out of a tough *Perianthium* or Cup that is split into two also. See Tab. I at d. The Flowers of the fifth have six Leaves, they are small and the seed-vessels are like one another.

The Roots are differing, that of the first hath many small Fibers, and the fourth hath thicker and longer, with tender and small Fibers. The first burns the Tongue like *Persica* or Flea-bean, but somewhat less than in our countries. The Leaves of the fourth do not burn so.

I found them both in the *Danish* Haven, the first in great quantities; they flower in *July*.

The second hath somewhat differing Leaves from the two former, for although the lowermost Leaves agree with them of the first, yet they are less, and those that grow higher, and come up after the lowermost, are in two places deeper cut, so that the first part of the Leaf that stands out before, is not very unlike the Tongue, but the two sides are but a little indented in Table G it is marked with

There is also a difference in the Leaves of this Plant, as well as in the two before mentioned, for the Leaves that are nearest to the flowers are small and deeply cut, and that
with

with two incisions, and it burns the Tongue. The Flower is small, and hath six and sometimes seven Leaves. The Seed-vessel is like unto the former, only it is less. The Root is like that of the first, only it hath more Fibers; there is also a kind of thick sheath that surroundeth the Stalk, as is also to be seen in the fourth. I found this Plant near the first, the *Danish* Haven the 16th. of *July*. The third is yet smaller, but fuller of Leaves, only they are less, and not so deep cut, although they have also four Incisions like the second; in this I did not find that difference in the Leaves, between the lowermost and those that are nearer the Flower, it is in the Tab. Herbar. marked with c. The Flower is of five white Leaves; its Seed-vessel I could not yet see. Its Roots and small Fibers, I found it in the *South Haven* the Sixteenth of *July*; it burns the Tongue, its Leaves are thick and juicy.

I found in the same place another small Plant, exactly like to these, only the Flowers thereof were of a purple Colour, and the Leaves not so juicy; wherefore I did not draw it.

C H A P. V.

Of Scurvy-grass.

THis *Scurvy-grass* sends forth a great many Leaves from one Root, that spread themselves round about it upon the Ground. The Stalk grows out of the middle of these Leaves, which is a great deal lower than in our Country, with a few Leaves underneath the Sprouts. The Flowers are of four white Leaves, they grow many on the same Stalk one above the other, when one Flower fades, another cometh in its room when the Flower is past; the Seed appears in a longish Box, as you may see in the Figure; when on the contrary in ours the seed is found in a round one. The Root is white, somewhat thick and streight, with some small Fibers below.

A great quantity of this Plant is found on the Rocks, where they are not much exposed to the East and North Winds; I found it most in the *South, English, and Danish Havens*, the Earth was quite covered with it in the *Danish*.

C H A It was the first Herb I found in *Spitzbergen*, when we Landed the first time, it was so small that I could hardly discern it to be *Scurvy-grass*, but afterwards we found it in its full

F

per-

perfection, and it seeded in the Month of July.

It is observable, that the Leaves of this Herb have but little sharpness at *Spitzbergen*, and therefore it is much weaker than the Scurvy-grass of our Countries, so that we eat it instead of Salad in *Spitzbergen*, which we could not do our Scurvy-grass.

My Figure is like that cut, given in the Third Book, and the 35th. Chapter of the *German Herbal* of *Matthiolus*. See Tab. H at a.

C H A P. VI.

Of an Herb like Stone-crop.

THIS Plant is doubtless a kind of a Stone-crop but the Leaves are rough or hairy, not thick, nor so juicy as ours are, neither doth it burn or bite, like unto ours.

Before the Flower fully appears, it looks like unto that of *Esula*; but when it is quite blown and opened, it is of a purple Colour, and hath sometimes five, sometimes six, and sometimes I have seen nine Leaves, the Stamina of the Flower I did not tell, neither did I ever see the Seeds thereof. The Root thereof is very small and one Plant grows close to the other. We found this Herb on the low Lands of the *English* Haven. Afterwards we found abundance

of it amongst the Mosses on the 26th of June.
In the Tab. F. it is marked with *c*, and in the
Tab. I. with *a*.

C H A P. VII.

Of a Snake-weed.

THis is a small *Snake-weed*, and is found very rarely in *Spitzbergen*; the undermost Leaves of this Plant are the biggest, but they are not above the breadth of ones Nail, they grow singly on the Stalk, yet not above three of them, except the lowermost: the nearer the Flower, the smaller they are; they have within, not far from the edge many small knobs or spots answering to the points of the Leaves, wherein the Veins or Nerves are terminated, besides the Leaves are not quite plain, but somewhat rumpled at the brims. Out of the Root sprouts forth sometimes single and sometimes double Stalks, as you may see in the Cut, and this by-stalk is always somewhat lower than the chief Stalk.

The Flower grows in a close Spike, with many small Flesh-coloured Flowers, it was so small, that I forgot to tell the Leaves thereof: The Seeds were not then come to maturity.

The Third Part of the Voyage

The Root sheweth of what kind the Plant is, and wherefore it may be called *Bistorta* or *Snake-weed*, for it lieth twisted in the Ground, it is about the thickness of your little Finger where thickest, hath small Fibers, is brown without, and Flesh-coloured within, and of an astringent Taste.

I found this Herb in the *Danish Harbour*, on the 18th. of *July*. My Figure agrees most with that which *Camerarius* hath given in the Fourth Book and Third Chapter of *Matthiolus*, is marked with *a* in the Tab. I.

C H A P. VIII.

Of an Herb like unto Mouse-ear.

THis Herb bringeth forth smooth edged Leaves by pares, they are rough and like Mouse-ear.

The Stalks are smooth at their first putting out, but afterwards they grow rough, where the uppermost Leaves grow, they are roundish at the bottom.

At the end of the Stalk groweth a white Flower, out of its *Perianthium*, the number of its Leaves I did not tell, nor had I time enough to observe the Seed. The Root is round and slender, with small and tender Fibers.

It seemeth, this Plant should belong unto the hairy or rough *Alfine*, and perhaps it may be the third or fourth kind of the hairy *Alfine*, of *Dodoneus* in the Fifth Book and Tenth Chapter of his first *Latin Herbal*, if the Leaves of his were not cut, as these are not. I gathered this Plant in the *South Haven*, on the 17th of July. See *d* in Tab. G.

C H A P. IX.

Of a Plant like unto Periwinkle.

THis Plant runneth upon the Ground, and bringeth forth roundish Leaves by pairs on creeping Stalks.

The Leaves as I think are like those of *Periwinkle*, but they are somewhat rounder, and the largest of them are bent in before. The Stalk is somewhat knotty and woody.

The Flower appeareth at first, wrapt up like a Leaf, but after it is grown out a little more, one may see it to be a Flower, it grows out between the Leaves on the same Stalk.

The colour and shape of these Flowers, I could not at that time observe, because they were not yet blown, much less could I gather the Seed.

The Root is long, slender, round, woody and knotty, it hath small branched Fibers at

the bottom: I found it in the *South Bay*, behind the *Cookery of Harlem* on the 19th. of *June*, the 17th of *July*.

Since I neither saw the Flower nor Seeds, and in probability, it would have put forth more Leaves; I cannot determine, whether it be the *Pyrola minima*, whereof *Clasius* giveth us a Cut and Description in the Fifth Book of his rare Plants, in the 20. Chapter; or whether it may be *Pseudochamae buxus* of the *Hortus Eichstetenfis*, which is given by *Clusius*, in the 72th. Chapter of the before mentioned Book, by the Name of *Anonymos Colutea flore*, and accurately described, and *Camerarius* in his *Hortus*, giveth it us under the Name of *Anonymos Pervincea folia*. In the Tab. G. it is marked with *b*.

C H A P. X.

Of an Herb like a Strawberry.

THis agreeth in its Leaves with the *Strawberry*, for it hath three cut Leaves on the end of the Stalks, and its Flower hath commonly five Leaves (seldom but four) and is like a Strawberry Flower, the Stalks are round and rough, and so are the Leaves.

On the Stalks you see two Leaves one against the other of a differing figure and bigness, for one looketh like a Hand, and the other like a Finger,

Finger, the size also is different, for some have but three Fingers, and others have more.

The Flower is yellow, the Leaves of the Flowers are roundish, how many, I observed not: The Root is woody, somewhat thick with small Fibers, a little scaley at the top, it tastes dry and astringent like *Tormentill*.

In the Herbals I could find none liker it, than that which *Lobelius* calleth *Fragaria Sylvestris minime Vesca sive sterilis*, and in the universal *Iherdumisch* Herbal, in the 70th. Chapter of the 17th. Book, by the Name of *Fragaria non fragifera vel non vesca*, yet it differs in the Flower and Leaf; for the Leaves in my Plant are cut deeper, and the Flower of his is white. In Tab. H. it is marked with b.

C H A P. XI.

Of the Rock Plant.

This Plant belongeth to those called *Wier* by the *Dutchmen*, and *Fucus* in *Latin*.

It has a broad flat Stalk like a Leaf, and yet there sprout out of it many equally broad Leaves like it, as Twigs out of a Tree, at the top of the Stalks there are little narrow longish Leaves, some have five, others seven of these, of a yellow Colour, as the Herb is also, and they are transparent like *Glew*, I know

not whether one may take them for its Flowers. Close to these there grow other oblong Leaves that are hollow, and as it was blown up, and fill'd with Wind, and many lesser Bladders round about close to one another. The Leaves that are blown up have nothing in them but Wind; for when I pressed them together, they gave a little bounce, whether these small Bladders have Seeds in them or no, I could not observe.

The Seamen informed me, That from the Seeds of that Plant, the small Sea Snails are produced, but I am not satisfied, whether they proceed from these Bladders, or from Eggs as our Snails do.

It may be after the same manner, as we find on many Leaves in our Country, Bladders filled up with the Seeds of Worms or Caterpillars, yet I dare not assert it, because I had no opportunity to search narrowly into the matter: the Root groweth out of the Rocks, wherefore I call it a Rock Plant, it hath some Fibers, and is sometimes round; I found this Herb in great plenty, first in the *South Bay* near the *Cookery of Harlem*, where we take up the Water; then in the *Mussel Haven* at *Spitzbergen*; then at *Cales* in *Spain*.

When this Herb is dried, it looketh brown and blackish, it gives and groweth wet again when a South or West Wind blows, because of the Salt that penetrates it; but when the Wind is East or North it is stiff and dry.

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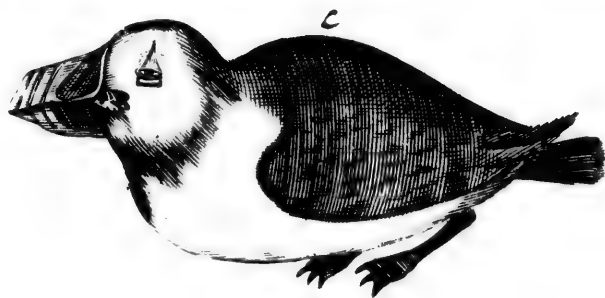
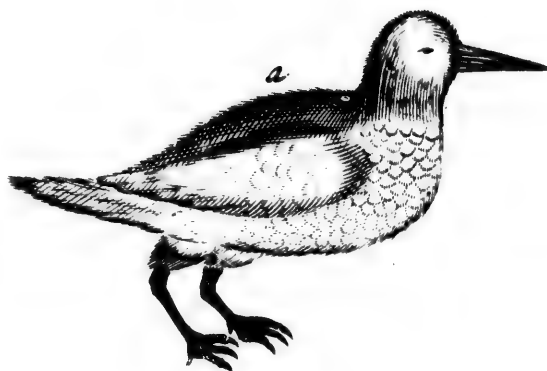
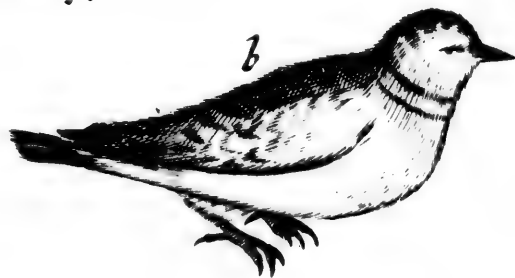
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Tab. K. pag. 73.



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Among all the Figures that I have seen, I find none liker than that given in the 39th. Book, and the 50th. Chapter of the *Ifurdunish Herbal*, by the Name of *Alga Marina Platyceros porosa*, only that this is porous or spongy and white. In the Tab. F. it is marked with *b*.

The Leaves of the great Rock Herb, are very like unto a Man's Tongue, it is on each or both sides curled, but plain before and not curled, through the middle of it run two black Stroaks or Nerves to the Stalk, and on the outside of them appear many black spots, within the black stroaks, on each side, to the middlemost plain stroak; the Herb is adorned with small curles, in the middle it is quite smooth to the Stalk, on the end of the Leaf, next the Stalk, are two white stroaks almost to the middle of the Leaf, bending round outwards, if they were quite closed, they would make an Oval.

The Leaf is above six Foot long, and yellow, and the Stalk yet longer; the Stalk is round and smooth, of a yellow colour like unboiled Grew, near the Root it is thicker than at the Leaf, and it smells of Mussels.

The Root hath a great many Branches that are divided again, and stick very close unto the Rock underneath the Water. The whole Plant groweth under Water several Fathoms: When we wayed our Anchor, we pulled it up in great quantity from the Ground.

Together with this Herb we pulled up the hairy Plant that stands by it, about six Foot long,

long, and it is very like an Horfes Tail, only that here and there it hath some small knobs like nitty Hair, or such as are split at the ends the whole Plant was browner of colour than the former, and its Roots was fixed unto the former.

In these Plants were some redish Worms wrapped or folded up like Caterpillers, with many Legs. They are figured Tab. P. at i.

The Herb was like Dodder, wherefore it may be call'd Water or Rock Silk. Amongst all the Icons that I have seen in printed Herbals, I find it comes nearest to that hairy Plant, which *Antonius Donat*, in his Book of Plants growing about *Venice*, calleth in his second Book, *Mus argenteus Marinus, similis Plume*, only this is as white as Silver, but rather yellow or brown.

Of these two Herbs we found great plenty in the *South Haven* on the 20th. and 21st. of *July*.

There is another Sea Plant, which I call Sea-grass, whereof there is plenty in the *English Haven* underneath the Water above eight Fathoms long. The Leaves were about two or three Fingers broad, of a yellow Colour like Glass and transparent, ending in a blunt point, at the top smooth edged, without nicks or prickles every where plain and even, the Leaves grew from the Root round about it, as it were out of one hole in the Tab. I. it is marked with b. c.

The End of the Third Part.

THE
FOURTH PART
OF THE
VOYAGE
TO
SPITZBERGEN:
OF THE
ANIMALS of SPITZBERGEN.

The *PREFACE* of the Animals, but
chiefly of the Birds in general.

THE *Animals* of Spitzbergen here descri-
bed, are either those with two or with four
legs.

About

About Spitzbergen also are some Creatures that live only in the Water, and have no Legs (except one would take their Fins, that are about the Breast for Legs, because as hereafter shall be seen their Fins are jointed like Legs underneath the Skin.) Some live in the Water, and also upon Ice and Land, and have either two or four Legs.

We will begin with them that have two Legs, with the Birds whereof the most live upon the Water, and but few of them upon the Ice or Land.

CHAP. I.

Of Birds with Toes or divided Feet.

OF Land-Birds I observed but one
Viz.

I. *Of a Snite.*

This *Snite* which is also called the *Strutter* (because it keepeth about the *Strait*) is no bigger than a Lark.

Its Bill is narrow, thin, and corner'd with all. Our *Snites* Bills are at the farther end broader and roundish, and cut in with connotches like a Rasp to rasp Wood withal; so that the whole upper Jaw and Bill looketh exactly like a Raspe with its handle. Our *Snites* are also bigger than those of *Spitzbergen*, other

the Creatures that are very like one another in Shape and
 four; this Bill both above and below is four-
 are about the size of a brownish colour, and about two
 er shall be seen long. The Head is roundish, and of
 underneath the same thickness with the Neck.
 and also upon Their Feet are made of three divided Claws
 or four Legs fore, and one behind which is very short,
 ave two Legs their Legs are not very long. It is of the co-
 e upon the bill of a Lark; but when the Sun shines upon
 or Land. it shews blewish, very like those two Colours
 observed on our Ducks Necks when the Sun
 shines upon them. They feed upon the little
 gray Worms and Shrimps.

I. We shot some of them in the South Harbour,
 near the Cookery of *Harlem*, they had not the
 taste of Fish at all. See Tab. K. at *a*.

divided Feet.

II. Of the Snow-bird.

but one

The *Snow-bird* is no bigger than a Sparrow,
 and like a Linnet in his Shape, Bill and Colour.
 The Bill is short and pointed, its Head of
 the same thickness with its Neck. The Legs are
 like the Linnets, their Feet are divided into
 three fore Claws, with longish crooked Nails,
 the hinder Claw is somewhat shorter, but hath
 a long bended Spur, or Nail. The Legs are
 whitish, and not very long.
 From their Head over all their Belly to the
 all they are white like Snow, but all over their
 backs and Wings they are gray. Some of them
 are gray all over, but these are little ones.

Spitzbergen, other

I can

I can tell nothing of its singing, only that it whistleth a little, as Birds use to do when they are hungry.

When we sailed near the Ice, they came in great flocks to us in our Ship, near the Island *John Mayen*, and were so tame, that you could take them up with your Hands.

They run upon the Ice where I only saw them, and not upon the Land, which is the reason that they are called *Snow-birds*.

They kept with our Ship till we caught the first *Whale*, and after that the other Birds frightened them away.

We fed them with Oatmeal, but when their Bellies were full, they would not suffer themselves to be taken up. We put some of them in a Cage, and hung them up in the Cabin, but they did not live long.

We eat some of them, and they were not of an unpleasant taste, but very lean. If I may give my opinion, why the Birds fly to the Ships, I believe that they are stray'd from the Islands, and that so the Hunger compels them to follow the Ships for Food. Tab. K. at b.

III. Of the *Ice-birds*.

I saw also in the *English Haven*, a very beautiful *Ice-bird*, which was so tame, that we might have taken him up almost with our Hands, but we would not go too near him with our Guns, for fear that we should shoot him all in pieces, and so spoil his curious Feathers, so we mistook him, and he flew away.

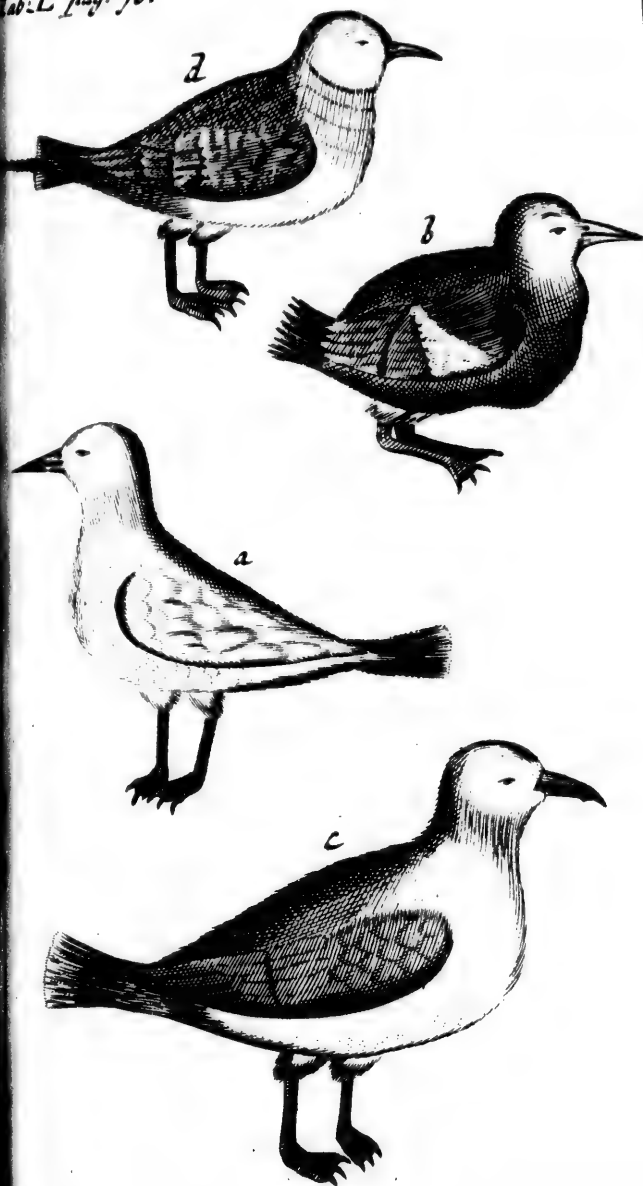
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The Sun shined at that time upon him, which made him look like Gold, so as it dazzled our eyes almost. He was as big as a small Pigeon. I would willingly have delineated him, if we could have caught him. I saw but this one of the Kind.

C H A P. II.

Of the Broad or Web-footed Birds.

THERE are several sorts of these about Spitzbergen. Some of them have thin pointed Bills, others have thick and broad ones. Some of the thick billed ones have them divided or parted as the *Malle Mucken* (mad Gnats *English*) others have undivided ones, as the *vet* so called.

There is also a considerable difference in the bills of these Birds, for some of them have bills, as the *Mountain-duck*, *Kirmen* and *Malle-ucks*: Others have them not at all, as the *Burmeister*, *Rathsher*, *Strundjager*, *Kutygekh Par-*
Lumbe, *Pigeon*, and the *Red Goose*; no Water-sticks to their Feathers no more than on the *ans* and other Water Fowl, for it runs off from them, as if they were oiled all over.

Some are Birds of Prey, others not. There is also a difference in their flying.

Some

The Fourth part of the Voyage

Some flie like unto a Partridge, as that call the Pigeon, others like Swallows, as the *Lum* and *Red Geese*, others like the *Mews*, as the *Mallennucke*, *Rathsher* and *Strundjager*, others like the *Stork*, as the *Burgermeister*.

The Birds of Prey are, the *Burgermeister*, *Rathsher*, *Strundjager*, *Kutygeghf* and *Mallennucke*. There is also a great difference in their Flesh, the Birds of Prey are not so good to eat as others, except you hang them up by their Legs for some days, that the Train Oil may run out of them, and the Air blow through them, and then you do not taste the Train Oil so strong for else it would make you Vomit.

The Pigeons, Parrets, Red Geese and Ducks are the most fleshy, the old Lumbs have a very tough and dry Flesh, not to disparage the *Rot Kirmews* and young Lumbs when boiled, and the Fat taken away from them, and afterwards fryed in Butter; for then one may make a Dish to eat them; but if you should eat their Fat it would vomit and disorder the Stomach very much. These Birds except the *Strundjager*, *Kirmew* and *Mountain-duck*, all make their Nests upon the high Rocks, where they are secured from the Foxes and Bears; but some of them make their Nests higher than others.

They sit in so great Numbers or Flocks upon the Rocks, chiefly at the time when they hatch their Young ones, which is about the latter end of *June*, and beginning of *July*, that if they fly up when the Sun shineth, they shade

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round like a Cloud, and make so great a noise,
 at one Man can hardly hear the other.

The *Kirmews* and *Mountain-ducks*, and also
 the *Strundjagers*, make their Nests on low
 grounds, (that one would think that the high
 water must needs run over them) on the small
 lands, where they are secure from the Foxes,
 not from the white Bears, for they swim in
 the Water from one Island to the other. We
 took up great store of their Eggs.

The Nests of these Birds are not all made
 in the same manner. For the *Mountain-duck*
 makes its Nest of the Feathers of its own Belly,
 mixing them with Moss.

The Feathers of these Nests are not the Ed-
 der Down, brought us from Island, for that
 cometh from great Birds (that the Inhabitants
 here call *Edder*) and costeth when it is clean-
 ed from the Moss a Crown a Pound, as I have
 been informed; But the Feathers of the *Moun-
 tain-ducks* of *Spitzbergen*, which they call Down,
 the Seamen put into their Pillows, and Straw-
 ks, which if they should be cleansed would
 be more worth.

The *Kirmew* layeth their Eggs upon Moss,
 as do the *Rotges*. The Nests of the rest of
 the Birds were too high for us, so that we could
 not reach them, and not without great difficulty reach
 them. If it be never so dark by reason of a
 mist, yet every Bird knoweth how to find their
 own Nest again, and flyeth directly to it.

Concerning the Names of the Birds I have
 made use of those, that the Seamen have given
 them

The Fourth part of the Voyage

them formerly, according to their own Fancy that he that heareth them called by these Names may also know how to find them by them in this Book.

Some of these Birds, as *Lumbs*, *Strundjager*, *Mallemucks*, *Kirmews*, and tho *Mews* called *Kutygehsen*, I have also seen about *England*, *Scotland* and *Ireland*; and also in the *Spanish* Seas, nay even upon the *Elbe* by *Hamburg*. I have heard the *Kirmew* and *Kutygehsen* cry, but there is a difference, as well between the *Beasts* as Men of other Countries.

I. Of the *Rathsher*.

First of the *Rathsher* (or Alderman in *English*) for this is the first of the thin billed Birds that have three Claws, and is called so by the Seamen, because he is a very stately and handsome Bird, but less than that which they call *Burgermeister* (or Major in *English*.)

This Bird hath a sharp, narrow and thin Bill and hath only three Claws or Toes, that are joined together by a black Skin, but he hath a fourth Claw behind. His Legs are not very long, and black, as the Eyes are also.

This Bird is whiter than the Snow, for when you see him upon the Ice, you may distinguish him from the Snow; he shews very beautifully with his white Body, his black Bill and Eyes, black Legs and Feet, and besides he is very well shaped.

Voyage

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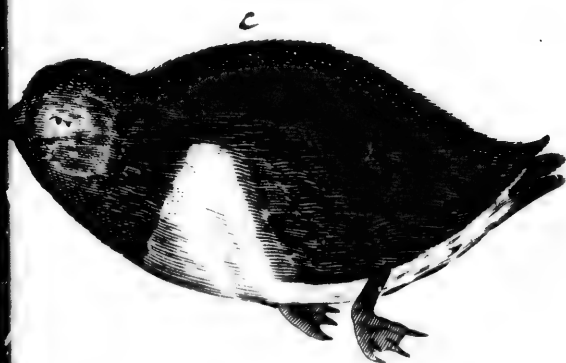
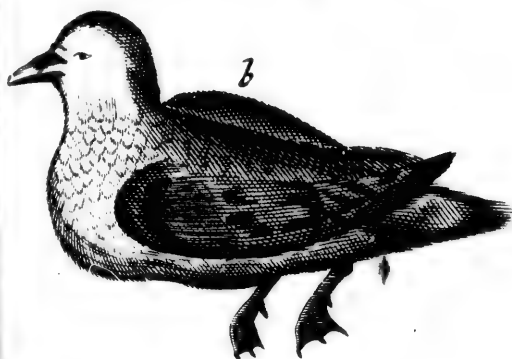
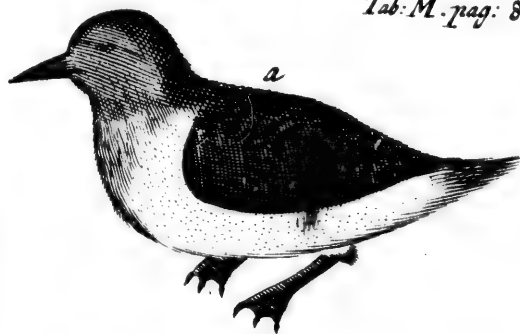
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Tab. M. pag. 82.



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His Tail is pretty long and broad, like a Lady's Fan.

His Cry is somewhat lower than the little *Kirmews*, as if he did say *Kar*, when she cries *Kir*, he spreads his Wings and Tail out when he flies, as the *Strundjager* or Crow doth. He doth not willingly swim in the Water as the other Birds do, nor doth he much care for wetting his Feet, but he stays rather where it is dry, yet he loves Fish mightily; and so the Proverb that we commonly say of the Cats is true of him; *The Cat loves to eat Fish, but does not love to wet her Feet.*

I have seen him upon the Ice feed on the Dung of a Sea-horse, upon whose Body he will rest while he is alive, as Crows will do in our Countries. He flieth commonly alone by himself, but where there is a Prey they flock in great numbers.

I did delineate them in the shallow Corner (called shallow Point) in *Spitzbergen*, on the 10th. of *July*, when we shot him, he was not wild at all, so that I could have knock'd him down with the Gun. See *Tab. L* at *a*.

II. Of the Pigeon.

The *Pigeon*, or rather the *Pigeon-diver*, is also one of the beautifullest Birds of *Spitzbergen*. It is of the bigness of a Duck, the Bill is somewhat long, thin and sharp pointed, at the point the upper Bill is somewhat crooked, about two Inches long and hollow within. It hath

The Fourth Part of the Voyage

but three red Toes on its Feet, with crooked Claws; it hath short redish Legs, and a short Tail.

Some of these Birds are black all their body over, and so was that which I delineated; about their Wings, and in the middle they are white pyed with black, but underneath the Wings they are quite white; others are in the middle of their Wings quite white; their Bill is red within; the Tongue is also red and hollow; they cry like young Pigeons, whence they have their Name, for they are in nothing else like them. In their Crops I found Shrimps or Prawns, and small Sand-stones.

They do not flie high over the Sea, and their flight is very like the Patriges: They do not flie many together as the Lumbs, but usually by pares, and sometimes one alone by itself.

They can keep a great while under Water, wherefore they may be called Diving Pigeons.

But chiefly when they are pursued by Men, or if their Wings be hurt by a Shot, they will dive and keep a great while under Water; and sometimes they get underneath the Ice, and there they are suffocated, they were as nimble and quick under Water (if their Wings or Feet are not quite shot off) as we could row with our Boat. Their Flesh is good to eat when the Fat is taken away from it, if afterwards it be tried in Butter.

The first Diving Pigeon I got the 23^d of May on the Ice, and afterwards at *Spitzbergen*, where

they are seen more frequently. See Tab. L.
of b.

III. Of the Lumb.

This Bird is the likest in his Bill unto the Diving Pigeon, only it is somewhat stronger and crookeder.

He hath black Feet, with three black Toes, and as many black Nails; his Legs are black also and short.

He is quite black at the top, but underneath his Belly even to the Neck he is snow white; his Tail is short.

His Cry is very unpleasant, most like that of a Raven, and they cry more than all the other Birds, except the *Rotger-divers*, he is bigger than the Diving Pigeon, as big as a midling Duck. In their Crops I find small Fish and Prawns, and also some Sand-stones; and one of them flying over our Ship dropp'd a large red Prawn into the Ship. I also delineated it in the mentioned place. They say likewise, that small fresh River Fish are their Prey; but this I cannot relate for certain.

When they have young ones, they commonly sit by the old ones one or two on the Water, who teach them to dive and swim. After the old ones have brought their young in their Bill, from the Rocks to the Water, the Preying Bird called *Burgermeister* sometimes catches the young ones, when the old ones are not present,

The Fourth Part of the Voyage

and sometimes when they are also, for they are not able to resist them.

They love their young ones so well, that they will be killed before they will leave them, (and will defend them as a Hen doth her Chickens, swimming about them) at other times they are very hard to be shot; for as soon as they see the Fire, they are immediately under Water, or fly away. They fly in great flocks, with pointed Wings like Swallows, and move their Wings much in their flight. One can hardly know the young *Lumbs* from the old ones, at the first sight, if you do not take exact notice of their Bills; for the upper part turns beside the under part, at the point, and the undermost beside the uppermost, as you see in the Cross Bill, yet not so much in these; and it is commonly done in the 15th, 16th, to the 20th. year of their Age. The old ones are full of Flesh, but it is very dry and tough, and therefore unpleasant to eat.

They boil them like the Pigeons, and scum off the Fat when they boil, then they fry them in Batter. I did not see them upon the Ice but abundance of them upon the Mountains. They go waddling from one side to the other like the diving Pigeons. I have seen many Thousands of them together in the *Danish* Harbour, on the Mountains, on that side where the East and Northern Winds could not blow hard or not fully upon them, (and so do all other Birds chuse such places on the Mountains for their Habitations) where the Herbs do grow.

for they are

But I saw not so many by the Haven of *Magdalen*, where I drew my Figure on the 25th. of July. Afterwards I saw some of them in the *Spanish* and *North* Sea, not far from the *Heilgeland*. See Tab. M. at a.

IV. Of the Mew called *Kutge-gehef*.

This is a beautiful Mew, and is called *Kutge-gehef*, because it cryeth so: He hath a Bill somewhat bent, as the *Burgermeister*; on the undermost part of its Bill is a small knob or rising: About his black Eyes he hath a red circle, as the *Burgermeister*; and he hath but three Claws, joyned together with a black skin.

The Legs are also black, and but short; the Tail is somewhat long and broad, like a Fan.

All the Belly is as white as Snow; the Wings and Back are grey, and the point of the Wings black. He is almost as big as an ordinary Mew, but something less than the *Strunt-jager*. When we cut the Fat off from the *Whales*, we saw abundance of them fly by the Ship, and heard them cry.

When the Seamen have a mind to catch some of them, they bait their Hooks with a piece of *Whales* Fat, and so tye the Hooks to a Line, and sling it into the Sea, and so they catch not only these, but all the other Birds of Prey. He flieth with small Wings as a common Mew, and dives not. His Food is the Fat of the *Whale*. He is hunted by the *Strunt-jager*

jager (in *English Dung-bunter*) who leave him not till he Dungs, which the *Strunt-jager* eats.

This I could hardly believe at first, until afterwards I saw it my self very often: That which I drew was caught by our Ship with a Hook, in the *South Haven*. I did particularly observe in this Bird, that it used to swim upon the Water, and hold its Head up against the Wind, if it was never so great a Storm; and so we found whole flocks of them swim upon the Water together.

This is not only to be understood of this Bird, but also of all the rest, for they look against the Wind that their Feathers may not be blown asunder and opened; for if they should sit or swim with the Wind, their Feathers would be blown asunder by the cold Wind, and so the Cold would get in between them to their Skin, which perhaps might prejudice their Health, for Birds are covered with their Feathers as Men are with their Clothes.

And so, when they fly up, they press against the Wind with their Bodies, and expand their Wings, and so fly away very swiftly; also their Feathers would be entangled, so that they could not have a sure and steady flight, but would falter in their flying, like Birds that learn to fly. There is but little Meat upon them; we eat but the Legs and the Breast, for the Wings are nothing but Skin and Bone. We have a Proverb, and say, *Thou art as light as a Mew*. This we may very well say of these *Mew*.

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I have seen them since in the *Spanish Sea*, and also in the *North Sea*, but yet they differ from these; and so do the Beasts of all Countries. See Tab. N. it is marked with *a*.

V. Of the *Burgermeister*.

The *Burgermeister* (in English *Major*) is the biggest of all the Birds of *Spitzbergen*, wherefore his Name is given him as being the Chief of them. His Bill is crooked, of a yellow colour, narrow and thick; his Under-bill is somewhat rising or knobby at the point or end, a great deal more than the *Kutge-gehefs*, which looketh very pretty, as if he had a Cherry in his Mouth; he hath longish Nostrils, and a red Ring about his Eyes, as I mentioned when I spoke of the *Kutge-gehefs*; he hath but three Claws, of a grey colour, his Legs are grey, and not quite so long as those of a Stork, yet he is almost equally big with him.

His Tail is broad, like a Fan, and white, which is chiefly to be understood of these Birds when they fly; his Wings are of a pale colour, and so is all the Back, but the Wings are white at the tip, and so is the whole Body. He builds his Nests very high in the Cliffs of the Rocks, where you can neither shoot nor catch them any other way; which was the reason I could not see their Nests. I have seen sometimes two, three and four of their young ones together; we shoot most of them when we draw a dead Whale behind our Ship, where they

The Fourth Part of the Voyage

they flock in great numbers, and bite off great pieces of the fat of the Whale; at other times we must shoot at them a great distance, as at other wild Birds, such as Ravens, Hens, and the like.

His Cry is like the Cry of some Ravens that I have sometimes heard; he flyeth in the Air like a Stork; he preys upon young Lumps of the Hawk doth upon all sorts of Birds; he feedeth also upon the fat of the Whale, whereof he doth swallow down pieces as big as ones Hand whole.

The *Mallamucks* are mightily afraid of him; they will lye down before him (when they are upon the Carcass of a dead Whale) then he bites them about the Neck, which I believe doth not hurt them much, because they have a very thick Skin, for else they would oppose and resist him, or fly away, but they do not matter it, neither will they leave their Meal for his biting. I have seen him also about the Sea Horses, whose Dung he eats. He flyeth commonly single, except when they meet at their Prey. He loves to rest on the water, but doth not care much for diving; we shot one before the *Weighegat*, on the 10th day of July. You see him at c in the Tab. L.

VI. Of the Rotges.

This Bird is a Diver, and might be rather called the *Diving Rotge*. His Bill is crooked

at short, somewhat thick, of a black colour ;
 Feet have but three Claws, with as many
 black Nails, and are joyned by a black Skin ;
 Legs are short and black ; he is almost all
 over black, except his Belly, which is white.

Some of this kind have their Wings spotted
 with white and black, like the diving Pigeon ;
 no Water sticketh to their Feathers, no more
 than to a Swans ; they are most of them like
 hair on a very thick Skin : Their Tail is short.

They are very much like a Swallow in their
 shape ; I took them at first to be Swallows, for
 they fly like them ; they are in great flocks to-
 gether, as the Swallows are when they are about
 to hide themselves against the Winter.

They go wabbling from side to side, as the
 Divers do ; they cry very loud *Rottet, tet, tet,*
tet, tet, at first high, and so by degrees lower,
 and lower ; and this their calling or crying is
 the occasion of their Name. They make more
 noise than any other Bird, because their Voice
 is shriller ; but the *Lumbs* in this are not much
 inferiour to them, although they cry lower ;
 the *Burgermeister*, *Ratther*, and the whole
 crew of Birds to *Spitzbergen* strike in with
 them, so that one can hardly hear another's
 words.

The calling or crying of the *Rotges* amongst
 one another sounds almost, at a distance, as if
 you hear a great many Women scolding toge-
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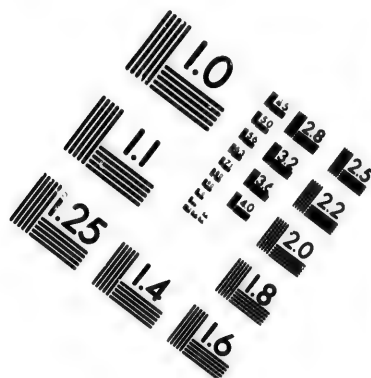
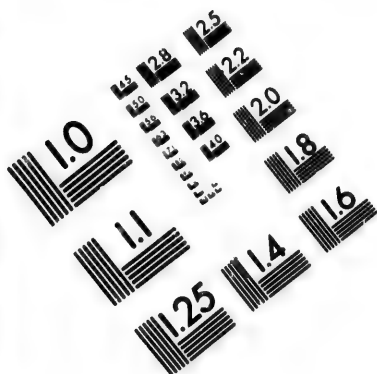
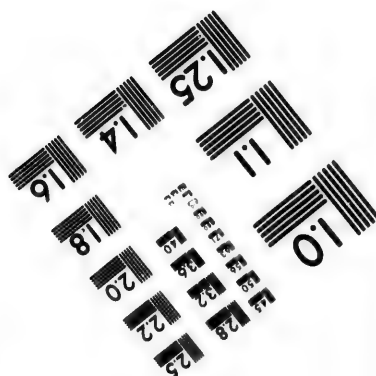
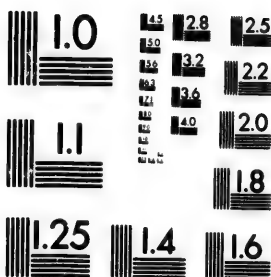


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They build their Nests in the Cliffs of the Rocks, yet not all of them, for some make their Nests upon the Hills or Mountains, of Moss where we found them, and we killed abundance of their young ones with Sticks. They feed upon the grey Worms that are like Crawfish which are delineated hereafter: They also eat the red Shrimps or Prawns. We got the first of them on the Ice on the 29th day of May, and afterwards more of them by *Spitzbergen*.

They are very good Food, and the best near the *Strandrunner*, are fleshly and fattish; we boyl and then roast them. In Tab. M they are mark'd with *b*.

VII. *Of the Struntjager (or Dung-hunter.)*

This Bird hath a Bill somewhat blunt before and crooked, and is thick; if I remember, it is black.

He hath but three Claws, which are joined together with a black Skin; his Legs are not very long; his Tayl, which is like unto a Fan, hath this mark, that one Feather thereof stands out before all the rest: He is black on the top of his Head: His Eyes are black; about his Neck he hath a dark yellowish Ring or Circle: his Wings as well as his Back, are Brown, underneath his Belly he is white; he is somewhat bigger than the Mew called *Kutge-gehes*; he hunts and flies in the Air after the Mew *Kutge-gehes*, so long torments her, until she avoideth her Dung, on which this Bird feeds, which he catches

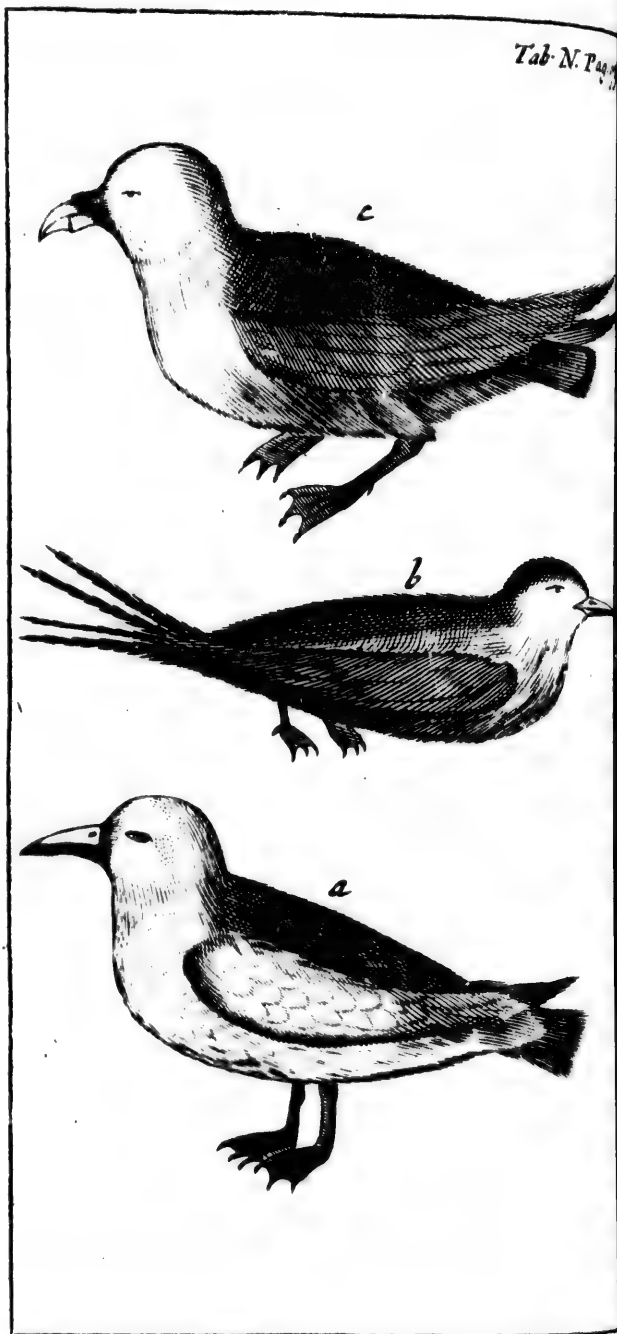
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Tab. N. P.

hes dexterously before it falls down into Water; and this is the reason why they call him *Strunt-jager*, in English the *Dunghun-*

He flyeth with the Mews called *Kutge-gehes*, which do not fear him in the least, and they are both equally swift in their flying, but when he intends to make them dung, he hunts them and makes them cry out very loud, but he himself seldom cries: He generally keepeth but to one Mew, but if two or three of the Mews be together, and one makes her escape from him, he hunts the other two, and flyeth sometimes above and sometimes underneath them. I could never see him hunt after any other birds, but once I saw him fly after a *Mallermuck*, but I saw him soon leave her, perhaps because Dung did not please him. I am of opinion that this Dung, because it is thin, serves him instead of Drink, for else he eats the Fat of the Whale for his Food: He builds his Nest not very

He goes upright upon his Legs, like the *Burmeister*, *Rhatsher*, or *Kutge-gehes*. It is a rare bird, and I saw but very few of them: He flies commonly alone; I saw very seldom two or three of them together; he flies like the *Rhatsher*, or like a Crow, but his Wings are somewhat more pointed at the ends.

He hath a loud Voice, when he cries it sounds as if he did say, *I ja*. To some it seems, if it be at a distance, as if he cried, *Jo han*. His Flesh is not better than that of the other Birds

Birds of Prey. I got on him the 11th of July near to the *Dear-haven*, or *Dear-bay*, in *Spitzbergen*; afterwards I saw this Bird behind *Scotts* hunt after the new *Kutge-gehes*. In the Table it is marked with *d*.

VIII. Of the Diving Parret.

This is commonly called the *Parret*. Among all the web-footed Birds, that have three Claws, this hath a peculiar Bill; and because it fees to those that gave him this Name to be different from that of a Parret, therefore they called him a *Parret*; but in truth his Bill is not at all different from that of a Parret, its Bill is broad, and full of slender strokes of several colours, *viz.* Red, White, and the broad part thereof is black. The uppermost as well as the undermost arch is both pointed; the uppermost arch is red, and his upper Bill hath a thin bended Hook; the undermost hath a yellowish arch, and is cut off somewhat towards the end downwards cut off somewhat sloping: The upper part of its Bill, as well as the lower part, is about three fingers broad, and about the same length, if you measure the upper and undermost together: He hath on the upper Bill four arched or bended oblong pits or holes, and on the lower he hath as many, though the furthest is not altogether plain.

These holes or pits of the upper and lower Bill make together a Half-moon; and the pits that are elevated make in the same manner.

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By these holes are as many raised or elevated parts; the uppermost of them is as broad as the three furthest ones together, and underneath on each side a longish hole which without doubt are his Nostrils; but the undermost on the under Bill is about a Straws breadth broader; the upper broad part is black, and sometimes blew.

On this broad part of the upper Bill that is elevated above the rest, is towards the Eye a long whitish piece of Cartilage that is full of vessels, whereon you see towards the inner part the Mouth something like a Nerve, which reacheth towards the under part, and there leth it self, whereby the Bill is opened and shut.

His Feet have also but three Claws, joyned with a red Skin between them, with three short strong Nails; the Legs are but short, and of a red colour; he walks wabbling.

About his Eyes he hath a red Ring, and above his Ring stands upright a little Horn, and underneath the Eyes lyeth another little, longish, black Horn cross over; as you may see in the figure.

His Tail is short: The Head is black at the point unto the Horn; but his Cheeks are white; about his Neck he hath a black Ring; all his back and Wings also, at the top or the outside, are black but underneath the Belly is white. They fly either singly or by pairs, and have sharp

sharp pointed Wings like the Lumbs. He keep a great while under Water. He eats the rest, red Shrimps or Prawns, small Fish and Worms, and also the Sea-spiders and Star-fish for I found something in his Stomach that lookt like pieces thereof, but they were almost digested.

He hath more Flesh upon him than the wing Pigeon, and is very good to eat. I never saw him among the Ice. This whereof I shew you the draught was shot at *Schmerenberg Spitzbergen*, on the 20th day of *June*, but afterwards we got several more. In the Table see *d*.

IX. *Of the Mountain-Duck.*

Hitherto we have described the web-footed Birds that have three Claws that are not divided, that I saw and got about *Spitzbergen* must now describe those that have undivided Feet with four Claws, whereof I found three sorts, *viz.* the *Mountain-Duck*, *Kirmew*, and *Malle-mucke*.

The *Mountain-Duck* is a kind of our wild Duck, or rather wild Goose, for she is of the bigness of a midling Goose, and is more like a Goose about the Bill. It is a very handsome Bird, because of its delicate spotted Feathers. They dive under Water as other Ducks do. The Drake hath black and white spotted Feathers, and the Duck hath Feathers of the colour of a Partridge. The hindmost Claw

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ould make me certain of their Food, but only
nd-stones. They fly a great many of them
flocks like other wild Ducks; when they do
any Men, they hold up their Heads and make
very long Neck. They make their Nests upon
low Islands; they make them of the Fea-
thers of their Bellies, which they mix with Moss;
these are not the same Feathers which are
called the Edder-down.

We found their Nests with two, three, or
four Eggs in them, the most whereof were rot-
ten when we came to *Spitzbergen*, but some of
them were good to Eat, they are of a pale
green, somewhat bigger than our Duck-Eggs;
the Seamen made an hole at each end, and so
saw the White and the Yolk out, and strung
the Shells upon a Pack-thread. I would have
bought some of them to *Hamburgh*, but they
began to stink, so that I was forced to fling
them away, although the Shells were entire.
These Ducks have a very good Flesh, we boyl'd
and roasted them as we did the other Birds, but
the fat of them we flung away, for it tasted of
rain-oyl, and made us vomit.

The Ships that arrived at *Spitzbergen* before us
saw a great many of them.

These *Mountain-Ducks* are not at all shy, or
afraid of Men, when we first arrive there, but
afterwards they grow quite wild, so that you
can hardly come near enough to shoot them.

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That which I have drawn here was shot in the *South Bay* (in *Spitzbergen*) on the 18th of *June* it is marked with *c* in the Tab. M.

X. *Of the Kirmew.*

The *Kirmew* hath a thin sharp-pointed Bill as Red as Blood; she shews very large, especially when she stands upright, because of her long Wings, and Feathers of her Tail, when the Feathers are off, there is no more Meat than upon a Sparrow. It is peculiar to this Bird to have very sharp pointed Wings and its Tail is longer than that of a Swallow and as long as the longest Feather of the Wings. Because of these long and sharp-pointed Feathers in her Wing and Tail, she might very properly be called the *Swallow-mew*, but it is commonly called *Kirmew* from its Cry. The Claws, as well as the Skin between them, are Red as Blood; the Nails are black on all four Claws; the hindmost Claw is very little. The Legs are short and Red: It shews very brisk and pert when it stands upright on its Legs. The Head at the top is Black, like a Black Cap; the sides of the Head are Snow white, and the whole Body is of a Silver colour, or white enclining to grey; the Wings and Tail are white underneath; one side of the Feathers of the Wings are black. All these differing colours, together with the Blood-red Bill, red Legs and Feet make her very beautiful: Her Feathers are thready or hairy;

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flies singly, for so I saw her always in the *South Haven*, and in other places, where we were. Where their Nests are they fly in great numbers; these they make of Moss. One can hardly discern their Eggs from their Nests, for both of them are of a dirty white, but the Eggs have black specks; they are of the bigness of a Pigeon's Egg; I eat of them at *Spitzbergen*, and found them very good, they tasted like the *Downings Eggs*; the Yolk was Red, and the white blewish; they are very sharp-pointed at the end. She defends her Nest and Eggs, and is directly at a Man, biting and crying. It is the same with her as what we say of the *Lapwing*; she endeavours to defend all the *Meadow*, and yet cannot defend her own Nest. I brought about thirty of their Eggs with me to *Hamburg*, but they were rotten and stunk. It is a kind of a Hawk, and throws her self into the water as other Mews do.

I am of an opinion, that she feeds on the small *Worms*, and perhaps on *Shrimps* and *awns*, for I found no other Food they could

I shot but one single Bird of them flying, which I did not eat of, because the large shot had torn it very much.

This Bird is quite grey in our Countries, which differs much from that of *Spitzbergen*, whose feathers are much finer. That here delineated, I shot, by the *Birds Song* in *Spitzbergen*, on the 20th of *June*. See it Tab. N. at b.

XI. *Of the Mallemucke.*

This Bird hath a remarkable Bill, which severally divided : The uppermost Bill next to the Head oblong and small Nostrils underneath them groweth out as it was a Bill, that rises up, is crooked and very sharp pointed.

The under part of the Bill consists partly of four pieces, two whereof meet in a point together downwards, the other two gape upwards the two undermost that meet in a point, meet exactly with the point of the upper Bill. The hinder Claw of the Feet of this Bird is very small, of a grey colour, and so are the other Claws and the Skin between them. The Tail is somewhat broad, the Wings are longish in the manner of the *Kirmew*. They are not always of the same colour ; some are quite grey which we take to be the oldest, others are grey on their Back and Wings, but their Head and Belly are white, which are the young ones. This is generally thought, but I am of opinion that this difference of colour proceeds rather from a difference in kind than from a difference in age ; for the grey ones I only saw about *Spitzbergen*, but the grey and white ones, although we have seen some few of them at *Spitzbergen*, we saw abundance more about the *North Cape* and also about *Hitland* and *England*. He flies like a great Mew, hovers near the Water with very small motion of his Wings.

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They do not avoid a Storm as our Mews do, but they take good and bad together, as it happens; ours bend themselves like an Ear of Corn with the Wind, which the Malle-mucks do not: They do not much care for diving, but when they wash themselves they sit upon the Water, and put their Wings a-cross one over the other: They fly singly; when they go to sleep they wabble a great way before they can settle themselves upon the Wind, but the Lumbs and Parrets that have but small Wings do it more. When they ran upon the Deck of the Ship, they could not fly up before they came to the place where a step went down, or from some advantageous rise. They flock in great numbers when we catch Whales, and light down upon the live Whales, bite them in their Backs, and pick out great pieces of his Fat, even when he is yet alive, and when we cut up the dead Whales, there came so many of them about us, that we could not imagine from whence they would all come, so that we were forced to kill them with Sticks and with broad Nets in Frames, such as they use in the Tennis-Court, to be rid of them: They are so bold, that they would not fly away, although they saw us come upon them, but suffered themselves to be killed in great numbers, which we hung upon the Tackle of our Ship.

But after they began to be more shy of us, and would not stay so long. They flock in so great numbers after the Whales, that many of them are discovered by them; wherefore I fan-

The Fourth Part of the Voyage

cy, that he flings up some fat when he blows the Water out, which the Mallemucks eat. But great many more, when the Whale is wounded follow the bloody track left in the Water, for then they are numberless. They also often discover a dead Whale, and so we get them sometimes without any great trouble.

His Name is given him, because he is so fat or mad (which the Dutch call *Mall*) to himself to be so easily killed, whereunto is given the word *Mucke*, which signifies a Gnatt, because they are as numerous as Gnatts ; so the Name *Mallemucke* signifieth as much as fat Gnatts, or mad Gnatts.

They eat so much of the fat of the Whale till they spew it up again, and tumble themselves over and over in the water until they vomit up the Train-oyl, and then they begin to eat afresh, until they grow weary of eating. They bite one another, and fight together which is very good sport, about a piece of Fat fiercely, although there is enough for them and to spare.

When they are full they rest upon the Ice or Water. I really believe it is the most devouring Bird of all, for he eats till he can stand no longer, but falls down. He bites very hard, but the Burgermeister bites yet harder, whom he submits himself, and lies down before him to be bit by the Burgermeister, which he does very severely, yet the Mallemucke feels little or nothing of it, his Feathers are so thick

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which I conclude, because he is not easily shot,
it will endure a great blow; nor is it easie
kill him with a Stick at one blow. When
they steer themselves in the Water with their
legs, they have continually an eye upon their
prey, yet they mind both the Man and their
prey; but if you have a long Stick, they can-
not get up so soon or swift but you may have
blow at them. He is the first and commonest
kind of all you see in *Greenland*; they cry all
together, and it sounds afar off as if they were
dogs. He walks but ill upon the Land and
is, like a Child that just learns to go, but
understands better to fly; you see him
ways near unto the surface of the Water, for
he is very light. Of all the Birds of Prey, I
believe, he hath the least Meat on him. He
builds his Nest high on the Mountains, yet not
very high as the *Burgermeister*, yet it was
so high for me, I could not come at them.
His Breast and Legs only are to be eaten, they
are tough, and taste strong of *Train-oil*; when
you will eat them you must hang them up by
the Legs, that the Fat of the Whales, or the
Train-oil, may run out of them, for two or
three days, and that the Wind may blow thro'
them, and the Frost pierce them also; then
you lay them into fresh Water, that the rank-
ness may be drawn out, afterwards boil and
eat them in Butter. They are every where seen
in the North Sea, as I have said before, yet they
differing. This that you see here I did design
to show you on the Ice the first of *June*. Tab. N. at c.

C H A P. III.

*Of some other Birds that I did not call
or delineate.*

Amongst these are the *Red Gees*, which were shewn unto me as they were flying: They are Geese with long Legs, that Fly in Flocks; there is many of them in *Russia*, *Norway*, and *Jutland*.

Then I saw another Bird Flying singly with broad Feet, a very handsome Bird, called *Jaeger of Ghent*; it is as big as a Stork, and of the same shape with white and Black Feathers; it hovers in the Air, and moveth his Wings very little; when he cometh to the Ice he runs back again. It is a kind of a Hawk, and I have reason to believe that he hath a very sharp sight for he shoots down from a great height into the Water. They say, that the Brains of this Bird are in great esteem, but for what I could not learn.

He is also seen in the *Spanish Sea*, and everywhere in the *North Sea*, but most commonly he is seen where they catch Herrings.

I was also informed, that a Black Crow was seen in *Spitzbergen*; other Birds are not seen there, except it may be now and then a single one that strays and so cometh thither, as the Crow did. All these Birds come at certain times.

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times, and abide at this place as long as the Sun shines; afterwards, when the Cold begins to increase, and the Nights lengthen, every one of them returns to its own place again. When they are going from thence they gather all together, and when they are all met they fly away, every kind by themselves, which hath been very often observed: Whence I conclude they cannot live in this intolerable cold place in the Winter. They rest as well upon the Water as the Land, (and when they fly up they look against the Wind) for else they would quite be tired in this long Journey.

Whether the *Mew* called *Rathshur*, that does not love the Water, performs its Journey in the day, I cannot tell; or whether Necessity compels him to rest upon the Water.

Which way those Birds that have divided claws on their Feet, as the Snite, the Snow-bird, and the Ice-bird, get over the Water, I now not.

C H A P. IV.

*Of the Four-footed Creatures.*I. *Of the Hart or Deer.*

THIS is not very unlike unto the *Hart*, it hath cloven Feet like it, and its Horns are also like unto a *Hart* or *Elke*; they have three or four branches on each side, which are about

about two inches broad, and about a foot long; their Ears are long, and Tail very short: He is of a greyish yellow colour, like an *Hart* or *Deer*. When they see a Man they run away; if you stand still they stand also, then you must immediately fire at them if you have a mind to hit them. They eat the Herbs and Grass. They are every where about *Spitzbergen*, but about all in the *Rene-field* (or *Deers-field*) that has its Name from thence, where they're very plentiful, and also upon the *Foreland* near the *Maja-Haven*. I never saw them swim in the Water. As I was informed, some Men did kill 15 or 20 of them on the *Vogel song* (*Bird-song*) the meat thereof roasted is of a very pleasant taste: We killed some of them presently, at our first arrival in the Spring, that were very lean; wherefore we may conclude, that they remain in the barren and cold Countrey of *Spitzbergen* all Winter long, and are contented with what they can get. See Tab. O. at a.

II. Of the Fox.

Between our Foxes and those of *Spitzbergen* there is no great difference; one of them I saw run by our Ship, very near it, his Head was black and Body white: They make such a noise as afar off it sounds as if a Man laugh'd. We saw them also run on the Ice. Their Food falls but short there, they live upon Birds and Eggs.

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They go not at all into the Water; we were
putting one of them in the *South Haven*, and
d surrounded him with Twenty Men, the
Water was on one side of him, and we endea-
oured to drive him into it, but he would not,
t jump'd through one Man's Legs, and run up
to the Mountains, where we could not fol-
w him.

The Ships Crew inform'd me, that when he
hungry he lies down as if he was dead, until
e Birds fly to him to eat him, which by that
ck he catches and eats. But I believe that this
a Fable. Tab. O. see b.

III. Of the White Bear.

These *Bears* are quite otherwise shaped than
ose that are seen in our Countrey; they have
long Head like unto a Dog, and a long Neck,
d they bark like Dogs that are hoarse, and all
eir whole Body is much otherways shaped
than ours. They are slenderer in the Body,
and a great deal swifter.

Their Skins are brought to us, which are
ry comfortable to those that travel in the
inter; they prepare or dress the Skins at
Spitzbergen after this manner: They heat Saw-
ast, and tread these Skins in it, which sucks
the Fat, and the Skins become to be dry,
er the same manner as we use to take out
ots of Fat out of fine Linnen or other Clothes,
hen we hold it against the Sun: They are of
e same bigness as ours, great and small:
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Their Hair is long, and as soft as Wool; their Nose and Mouth are black before, and their Talons also black: The fat of their Feet melted out, is used for pain of the Limbs; it is also given to Women in Travail, to bring away the Child; it causeth also a plentiful Sweat. The said Fat is very spongy, and feels very soft; it is best to try it up there presently: I strove to keep it until I should come home, but it grew fowl, rancid, and stinking. I believe it would be very good to try it up with Oris root, for then it would remain the longer good and smell well.

The other is like Suet when it is tryed up, becometh thin like Train-oyl, or the Fat of *Whales*: But this is not to be compared to the other for Vertue and Goodness, it is only used in Lamps, where it does not stink so much as the Train-oyl: The Skippers melt it out there, and bring it home with them to use it for Train oyl. Their Flesh is whitish and Fat, like that of a Sheep, but I did not care to try how it tasted, for I was afraid that their Hair would turn grey before its time, for the Seamen are of opinion, that if they eat of it it makes their Hair grey. They suckle their Young with their Milk, which is very white and fat, as I observed, when we cut up an old suckling She one. They say our Bears have a very soft Head, but I found the contrary in these at *Spitzbergen*, for we struck them with large and thick Cudgels, upon their Heads with such blows that would have knock'd down a Bear.

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Bullock, and yet they did not matter it at all. When we had a mind to kill them, we were forced to run them through with our Launces.

They swim from one Sheet of Ice to the other, they also dive under Water, when they were at the side of our Long-boat, they did dive, and came up again on the other. They also run up the Land. I did not hear them roar so as ours do, but they only bark.

We could not discern the young ones from the old ones, but only by the two furthestmost long Teeth, which in the young were hollow within, but those of the old ones were close and solid. If you burn their Teeth, and powder them, and give them inwardly, it disperseth coagulated Blood. The young ones keep constantly close to the old ones; we observed that two young ones and an old one would not leave one another, for if one ran away, it turn'd back again immediately as soon as it did hear the others, as if it would come to help them. The old one run to the young one, and the young one to the old one, and rather than they would leave one another, they would suffer themselves to be all killed.

They feed upon the Carcasses of *Whales*, and near them we killed the most: They also eat men alive when they have an opportunity to master them: They remove or roll away the bones of the burying places, open the Coffins, and eat the dead Men, which many have seen, and we can also conclude it from hence, because we find the dead Mens Bones lye by the Coffins

The Fourth part of the Voyage

Coffins that are opened. They also eat Birds and Eggs. We kill them with Guns, or any other way we can. We caught three of them, one whereof I drew after the Life, on the 13th of July.

What becometh of these *Bears* and *Foxes* in the Winter-time I do not know, in the Summer they have in some places, for a few Months Provision enough, but in the Winter, when the Rocks and Hills are covered with Snow there is but very little to be had for them; yet being it is supposed that the *Deer* stay also there all Winter long, I believe that these Beasts do the same. Tab. O. see c.

IV. *Of the Sea-dogs, called Rubbs and Seales*

I have still two more Beasts to describe, that live as well in the Water as on the Land and Ice, and they have also on their Feet five Claws like Fingers, that are joined together with thick Skin, like unto the Feet of a Goose: The most known of these is the *Seale*, which they also call *Salldogg* and *Rubbe*, in the German Language; the Head thereof is like unto a Dog's Head, with cropt Ears: Their Heads are not at all alike, for some are rounder, and others longer or leaner: he hath a Beard above his Mouth, and Hair on the Nose and the Eyelids, yet seldom above Four: the Eyes are very large, hollow, and very clear: their Skin is grown over with short Hair: they are of several colours, spotted like Tygers, some are black with

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ers red: Their Teeth are sharpe like a Dogs,
erewith he can bite off a Stick as thick as
his Arm: On their Toes they have black,
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st; they bark like hoarse Dogs; their little
young ones mew like Cats; they go lame
and; they can climb upon the high Ice,
whereon I saw them sleep, chiefly when the
shined, wherein they take great pleasure,
when it is stormy weather they must march
and leave it, for the Waves of the Sea beat
a great violence against it, as if it were
soft Rocks, as I have mentioned already in
Chapter of Ice.

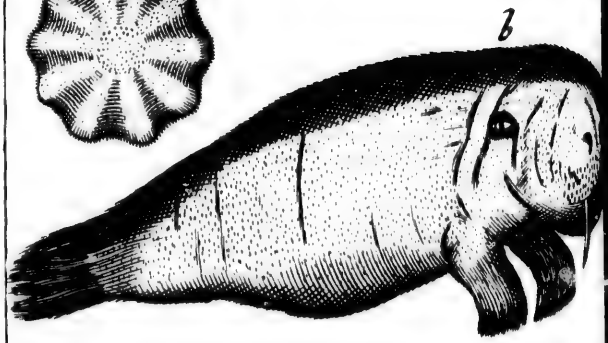
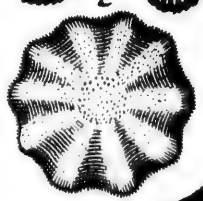
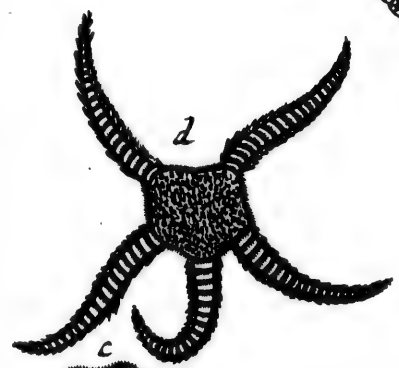
We saw most of them upon the Ice about
West side near to the shoar, where there
an incredible number of them, that if the
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gh, they might lade their Ship with *Seales*
y; and we have Examples that little Ships
taken their Lading only of them, but it is
troublesome to flea them: Nor are they
alike Fat at the time when we arrive
e.

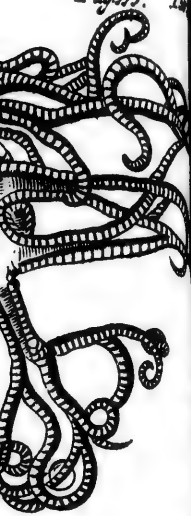
At *Spitzbergen* we see but a few of them, but
and of them there is plenty of Sea-horses.
ere many *Seales* are seen, that is not a good
e to catch *Whales* in. It seemeth as if they
e but very little for the *Wale* to live up-
because there is so great a number of them.
y feed upon small Fishes, as far as I could
erstand; we cut open several of them, and
found

found nothing in their Stomachs but great long whitish Worms of the thickness of a little Finger. We come up to them where they lye upon the large sheets of Ice; we make great noise with shouting, which astonishes them perhaps, or else out of novelty they hold up their Noses very high, and make a long Neck, as our Grey-hounds do, and bark at us. At this fright of theirs we strike them with long pikes, or long Poles upon their Noses, and knock them down half dead, but for all that they recover themselves, and rise again: Some of them stand upon their defence, bite at us, and run after the Men, and they run as fast as a Man, and their lame way of going doth not hinder them at all, for they shove themselves along just like an Eel: Some run from the Ice to the Water, and leave a yellow Dung behind them, which they squirt out at their Hums as the Hern does: They sink naturally about us. Others stand in the Water with their Belly, and look about them to see what is done upon the Ice: When they are going to dive under the Water, they hold up their Noses, and make a long Neck: When they rise from the Ice under Water, and also when they make a dance of *Scales*, as they call it, about the Ships, they constantly dive with their Heads under water. They have their young ones by them, one whereof we took away from us to the Ship alive, but it would not eat any thing, but did mew just like a Cat, and if we touch'd him he would snap at us, so we kill

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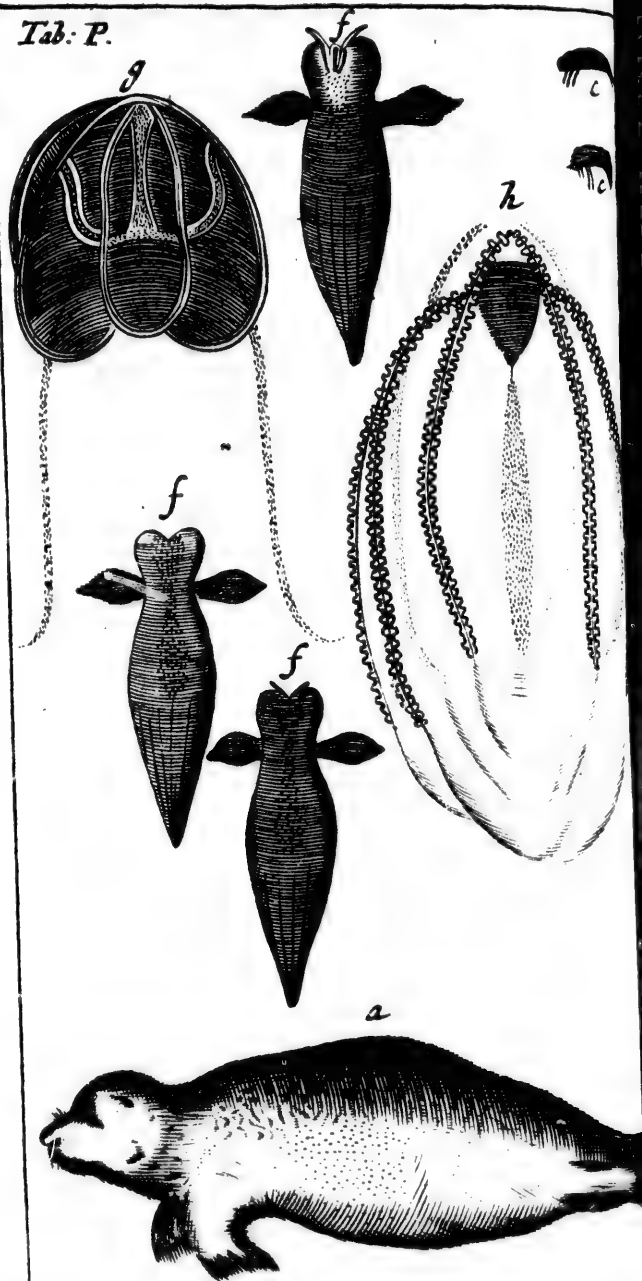




b



Tab. P.





m. The biggest of them that I have seen were from five to eight foot long, out of which we cut so much fat, that we filled half a Barrel with it. He that I have drawn here was eight foot long. Their Fat is about three or four fingers thick, it covers the Flesh just under the skin, and we do flea it off as a Skin: This Fat yields the best Train-oil; the Flesh is quite black. They have abundance of Blood. as if they were fully filled up with it. They have great Livers, Lungs, and Hearts, which we eat after we have drawn out the rankness with Water, we boil them, but this Dish is very loathsome, so that I could not eat it, it tasted so of Train-oil. He hath a bundance of Guts, which are very small: I found no Fat within them; their parts of generation is a hard Bone, like unto that of a Dog, about a span long, covered with Sinews; some were hardly so long as your little finger, and yet they were not young ones rather. The Crystal of their Eye is not of the same colour always, for some were like a Crystal, others white, others yellowish, others reddish; they are bigger than a Pea; if one will keep them he must let them dry gently, or one may wrap them in Linnen Rags, and so lay them in a moist place, for else they fly or crack to pieces. I am informed, that when they couple they are very fierce, so that a Man dares not come near them upon the Ice, then they bring their Long Boats near the Ice, and kill them out of the Boats. They do not quickly dye when the Blood is almost all run out,

out, after they have been mortally wounded and flea'd, they still live, and it looks ill to see them tumble themselves about in their own Blood. We had an Example of that in him that was eight foot long, for when he was flea'd and most of the Fat cut off, notwithstanding all the blows he had had upon his Head and Nose, he would still snap at us, bite about him, and took hold of a short Pipe with his Teeth after such a rate, as if nothing ailed him. Then we run a short Pike through his very Heart and Liver, and there ran out as much Blood as if it had been a Bullock. The Matters of the Ships will not suffer these nasty doings in the Ships, for it souls them mightily. Not only this was so vivacious, but all the rest are the same, for when we thought that they lay dead in our Long-boats, they snapt about them so that we were forced to kill them.

For Sports-sake I went once along with them upon the Ice, and run one through the Body with my Sword several times, which he did not matter at all; I fell into the Snow upon my Knees, and he barked at me, and offered to bite me, which I avoided, and when I got up again I ran after him, and gave him several Wounds more, which he was not concerned in, but ran swifter than I could, and flung himself off from the Ice into the Sea, and went down to the bottom. Tab. P, see A.

V. Of the Sea-horse, called by some the Morfe.

The *Sea-horse*, is not unlike unto the *Seale* in the shape of the Body, only is much bigger than the other: He is as big as an Ox: Their Legs are also like those of the *Seale*, for they have five Claws as well on the fore as the hinder Feet, but they have only short Nails: Their Head is thicker, and rounder, and also much stronger: Their Skin is an inch thick, chiefly about the Neck, covered with short Mouse-coloured Hair, some reddish, some grey, some have but little Hair, and are mangy, and full of Scarrs that are bitten, and look as if they were flea'd; every where about their Joints their Skin is full of Lines, as the inside of a Man's Hand: They have two great and long Teeth in their upper Jaw-bone, that hang down below their under Lips, that are about a foot and two foot long, sometimes they are longer: The young ones have no great Teeth at all, but they grow in time as they grow older. All the *Sea-horses* have two firm long Teeth; yet I have seen old ones that had but one; it may be that sometimes they loose them when they fight, or otherwise they may fall out of themselves, for I observed that some of them had foul, hollow, rotten Teeth. These two long Teeth are esteem'd beyond Ivory, because they are so very white, and are dearer; they are close and firm within, and heavy, but the Root thereof is hollow. Of their Teeth are made

Knife-hafts, Boxes, &c. The *Fatlanders* make Buttons for their Cloths of the other Teeth. Their Mouth is very broad before, like a Bulls, whereon grow above and underneath several Bristles that are hollow within, and of the bigness of a Straw: Of these Bristles the Seamen make Rings, which they wear on their Fingers for the Cramp. Above the uppermost Beard they have two semicircular Nostrils, whereout he blows the Water, like the Whale, yet with a less noise. Their Eyes are at a good distance from the Nose; they have Eyelids as other fourfooted Beasts have; his Eyes are naturally as red as Blood when he doth not turn them, and I could see no difference when they were moved, for they always turn their Eyes when they did look upon me, and then they look much uglier, tho' they are never handsome. Their Ears are somewhat higher than the Eyes, but very near to them, which are like those of the *Seales*. Their Tongue is at least as big as a Neat's, when it is but newly boiled it may be eaten, but if it is laid by for two or three days, it becomes rank, like Train-oil. Their Neck is very thick, wherefore he does not readily turn his Head about, and this is the reason why he turneth his Eyes generally. Their Tails are short, like those of the *Seale*.

From their Flesh we cut no Fat, it is all mixt together like unto Hogs-flesh, to which it is the likeliest: Their Heart and Liver we did eat; they taste well enough, chiefly where we have no great variety of Dishes. Their Yards

Fatlanders make the other Teeth before, like a Bull, and underneath within, and of these Bristles they wear on their the uppermost circular Nostrils, like the Whale, eyes are at a good have Eyelids as his Eyes are na the doth not turn erence when they turn their Eyes e, and then they re never handsoner than the Eyes are like those of at least as big as boiled it may be wo or three days yl. Their Neck does not read is the reason why Their Tails are

no Fat, it is all flesh, to which and Liver we did chiefly where we es. Their Yards

are of a hard Bone, about two foot long, thick at the bottom, and less before, somewhat bent in the middle, at the side to wards their Belly it is flat, but it is round without, and it is every where covered over with Sinews. They turn also *Knife-hasts* and other things out of this Bone. What their Food is I cannot certainly tell, they may perhaps eat both *Herbs* and *Fish*; that they eat *Herbs*, I conclude from hence, that their Dung looks like Horse-dung: That they eat *Fish* I judge, because when we cut the Fat off a Whale, one of them did often take the Skin with him under Water, he did also fling it up, and catch it again. The *Burgermeister* doth eat his Dung, as is said before when I writ of the Birds. The *Sea-horses* keep generally about *Spitzbergen*, for among the Ice-hills I saw none. They lye upon the Ice, as I have already mentioned in the First Part, by the 12th of *July* very nastily, as the *Seales* in great numbers, and roar most terribly. They dive with their Head under the Water before, like the *Seales*. They sleep and snore, not only upon the Ice, but also in the Water, so that we take them several times for dead ones.

They are very stout and undaunted Creatures, they stand by one another as long as they have Life, and if any of them be wounded they make to the Long-boat, notwithstanding that the Men strike, and cut, and push at them; some will dive under the Water near unto the Long-boats, and cut holes in them with their great Teeth under Water; and others, without any fear at all make to the Boat, and stand up

with half their Body out of the Water, and endeavour to get into the Boat.

In such a Battle a Sea-horse did once strike with his *Teeth* or *Tusks* into the Boat, and took hold of our Harponier with his long Tooth, between his Shirt and the Waistband of his Breeches, so that the Waistband broke, otherwise he had pulled him under Water.

When they roar, if they are imitated, they strive which shall get underneath the Water, and fall a fighting and biting one another till they fetch Blood. Others strive to set at liberty the Sea-horses taken by the Men, striving before each other to get to the Boat, biting and gnashing with their Teeth, and roaring terribly. They never give over so long as one of them is alive; and if you are forced to fly, because of their unspeakable number, they will follow the Boat till you lose them out of sight, for they cannot follow far, their great number hindring one another. This we found by *Weibegat* by *Spitzbergen*, where they got together in great numbers, and made our Boat take in Water, so that we were forced to flee, yet they followed us as long as we could see them, on the ninth day of *July*. We take them only for their Teeth: You shall see almost a hundred of them before you find one that hath good Teeth, for some of them are but small, others have but one, and others none at all.

I saw one in the *English Haven* lying on a sheet of Ice; at first we took him to be a Seal, but we found it was an old, bald, and mangy

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Sea-horse. We gave him some blows, which
he took, and dived under Water. When they
see them lye upon the Ice, or hear them roar,
they row with their Boats to them, where they
lyein great numbers, but I believe one of them
keeps watch, for I have several times observed
that one of them did strike him that was next
to him with his Tooth, and so it went on:
When they awake they rise up and stand upon
their fore-foot, look terribly, and roar, and
strike with their long Teeth into the Ice for
madness, and so draw themselves along by the
help thereof, when they run a-pace, or climb
upon the Ice, as the *Seales* do. Their greatest
strength lyeth in their Head, and their Skin is
thickest about the Neck, it is thicker than that
of an Elk, and it is also a great deal firmer;
wherefore if they were dressed like an Elk's
Skin, they would serve instead of the best Buff-
coat. When great multitudes of them lye up-
on a sheet of Ice, and they do awake and fling
themselves into the Sea, you must keep off your
Boat at a distance from the Ice, until the greater
part of them are got off, for else they would
jump into the Boat to you, and overset it,
whereof many Instances have been; then the
Harponier runs after them on the Ice, or he
darts his Harpon out of the Boat at the *Sea-*
horse, who runs on a little until he is tired, then
the Men draw on the Rope or Line again, and
fetch him to the Boat, where he begins to resist
to his utmost, biting and jumping out of the
Water, and the Harponier runs his Launce in-

to him till he is killed. When they dart the Harpoon at them, they always take the opportunity to do it when he is precipitating himself from the Ice, or when he diveth with his Head under Water, for then his Skin is smooth and extended, and therefore the Harpoon striketh through the Skin on his Back the better; but when he lyeth and sleepeth his Skin is loose and wrinkled, so that the Harpoon does not pierce the Skin, but falls off. The Harpoon for a *Sea-horse*, and the Launce also are short, of the length of one span, or one and a half, and an inch thick, and the wooden Staff thereof is about six foot long; the Harpoon for a Whale is much too weak to pierce his thick Skin withal, yet both of them are very well temper'd, and of good tough Iron, and not much hardened. When the *Sea-horse* is killed, they take his Head only and leave the rest, this they carry on Board, where they cut out the Teeth; the two great ones belong to the Owners or Merchants of the Ship, but the small Teeth are not esteemed. I cannot but mention that we were by a Field of Ice, where so many *Sea-horses* lay, that the weight of them made the Ice even with the Water, but when they were jumped off into the Sea, we could hardly step out of our Boat upon it, so high was it risen out of the Water. It was related to me, by those that used this *Greenland Trade* every Year, a certain Truth, that once when they had a good fortune to catch Whales, they rowed with their Boats to the *Muss Island*, which was the

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of *Sea-horses*, they ventur'd upon them coura-
giously with cutting, striking, pushing, and
shooting, so that they killed a very great many
of them; but when they saw that still more
and more of them got together, they laid the
dead *Sea-horses* round about them, and stood in
the middle of them, as in a Castle, leaving a
place open where the others might come in to
them, as through a Gate; and after this manner
they have killed several hundreds of them, and
made a good Voyage of it; for some Years ago
their Teeth have been in greater esteem than
now. The Figure of this Beast you may see in
the Tab. P. marked with *b*.

CHAP. V.

Of the Crustaceous Fish that I observed.

I Found two sorts of them, *viz.* *Crawfish* and
Starfish; of the *Crawfish* I saw four sorts, the
Sea-spider, as the *Frenchmen* call them, the *red*
Prawn, the *small Prawn*, or the little small
Shrimp, and the *Whale's Louse*.

The *Starfish* I put to them also, because they
have their Arms or Legs, wherewith they move
themselves, and are incrustrated with Shells.

I. *Of the Sea Crawfish without a Tail, or Sea Spider.*

This sort of *Crawfish* has no Tail, but six Feet and two Claws. They are also very like Lobsters in the shape of their Body. They are of a dark brownish colour, somewhat prickly on their Backs, and hairy all over their Body. I have seen many of this kind with six Feet and two Claws, in my Voyage to *Spain*, where I have also made a draught in my Voyage into *Spain*, (which I shall, God willing, communicate to the Curious) but they differ from those of *Spitzbergen*, in their Bigness and Head; this of *Spitzbergen* hath a Head like a Lobster, but the male of them that I saw in my Voyage to *Spain*, made with its Head and Tail just the shape of a Lute. I did not eat any of the *Spitzbergen Sea Crawfish*, neither have I drawn them at *Spitzbergen* for want of time, for I thought to have them brought along with me, but they were carried away by the Rats. I got them in the *English Haven*, on the 19th of June, I afterwards saw them in the North Sea, not far from *England*, where we bought from the *Hilgeland* Fishermen a great Tarbut, in whose Stomach we found a Sea Crawfish two span long when its Feet were spread out.

II. *Of the Garnels or Prawns.*

Betwixt our *Prawns* and those of *Spitzbergen* is no difference, only that those of *Spitzbergen*

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are red before they are boiled. Their Head is peculiar, consisting of two parts, with several Horns; the whole Head is broad, at the end of the Head are the Eyes, which stand out as Crawfishes do; he doth not look downwards, but streight before, and sideways. The Scale of his Back is like a Back-piece of Armour, which also behind the Head, in his Neck, is somewhat bended in, and behind it, is a Prickle. After that follow six Plates, like the Armour for the Arms and Legs, and about the Brims thereof are small black spots, as if they were the Nails of the Armour. These Plates lye exactly round one upon the other. The Tail consisteth also of five parts; when he expands it, it is like the Tail of a Bird. He hath two Claws before, the further part whereof looks somewhat like the Phangs of a Tooth-drawer. He hath 18 Legs, whereof those that are nearest to the Claws are the shortest. The first eight Legs have four Joints, whereof the uppermost is the longest, and the undermost the shortest: They are not hairy at all. The ten hindmost Legs, whereof the furthestmost are the longest, and the uppermost Joint is much thicker and shorter, than the lowermost long ones have but two Joints, the Feet whereof are somewhat bended under, and are hairy. On these hindmost and undermost Joints grow out two shoots below, on the rest but one. He shoots very swiftly along in the Water. He was as big as I have delineated him, according to the Life. They are Food for the Birds, as I have mention'd before.

III. *Of the lesser Garnel or Shrimp.*

I have also taken notice, in my Voyage to *Spitzbergen*, a sort of *Shrimps* that are like Worms; the Head thereof is like the Head of a Fly; it hath on the foremost part of its Head two Horns standing out; it hath Scales like the *Hog-louse*; its Back is round, and broad downwards; it hath 12 Legs; on each side of the foremost Scale it hath three Legs; after you have told four Scales more, there is on each side three Legs more; they are no bigger than I have drawn them. The Birds eat them as their best Food, being always in great numbers in those places where these Worms were. I found great plenty of them in the *Danish* Harbour, between and underneath the Stones in the Water; afterwards on the Eighth of *July* I found them in the *Mussel-haven*. I have also found them in the Seed of the Whales that swam upon the Water. See *c* in the Tab. P.

IV. *Of the Louse of the Whale.*

The *Whale's Louse* hath no resemblance at all to our Lice, except in the Head, and therefore it belongs rather to the Crustaceous Animals. Their Scales are as hard as those of the Prawns. They have a Head like a Louse, with 4 Horns; the two short Horns that stand out before have two knobs, like Kettledrum-sticks; the two other bended Horns are sharp before. Its Head hath

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almost the shape of an Acorn, is cut very deep behind. It hath two Eyes, and but one Nostril. The Neck is not made of stiff Scales, but its Skin is like that between two Scales or Plates of a Lobster. It hath six Plates on the Back; the foremost of them is shaped like a Weaver's Shuttle. The Tail might be compared unto a Shield, but it is very short. On the foremost Plate it hath Feet shaped like a Sythe; they are round before, and bent, like the first Quarter of the Moon; but on the inside they are toothed like a Saw, and at the end thereof there is a sharp point: On each side of the second and third Plait grow out four Legs that are his Oars; they have a short Joint below, wherein these Oars are moved; these they lay in a cross one over the other, upon their Back, when they feed upon the Whale; or they put them upwards together, as the Vaulters do when they jump over Swords: The six hindmost Legs are like those of a *Crawfish*; they have three Joints on each Leg, the foremost whereof are crooked like a Half-moon, but before, or on their ends they are very sharp pointed, so that they can take firm hold as well of the Skin of Men as of that of the Whale, so that you must cut them in pieces before you can pull them from the Skin. He that will have them alive, must cut the Skin of the Whale out with them. They sit on certain places of the Whale's Body (as between his Finns, on his *Pudenda*, and on his Lips) where he cannot easily rub himself, and bite pieces out of his Skin, as if the Birds had eaten him.

Some

Some Whales are full of Lice, and others have never a one: The warmer the Weather is, the more Lice they get, as I am inform'd. The Figure that I give you here I delineated in the *Mus. sel-haven*, on the 7th of July. See Tab. 2 at 4.

V. Of the Starfish.

I have seen but two sorts of these in my Voyage, the first of them hath five Points or Rays like Legs; it is quite otherwise shaped than those that I have seen in the *North, Spanish, and Mediterranean Seas*. It is of a red colour: Above upon the plain of its Body it hath five double rows of sharp knobs or grains; between each of these double rows is a single row of the same knobs on the whole plain, so that in all there is 15 rows of knobs on the whole plain. These 15 rows together make a Star of five outward bended points.

As for the rest, this Plain looketh like the Back of a Spider, but if he is turned he looketh neatly, and in this Posture is seen in the middle a five-corner'd plain Star; which I take to be its Mouth, which he can open and draw together like a Purse. Round about this Star are small black Spots, in rows, of the shape of a Star. Further forwards, about the middle Star or his Mouth a broader one is, like unto the Flower of the Crowsfoot. From the middle Star proceeds five Legs or Arms, which have no knobs where they begin, but begin first to have some behind the Flower like shaped Star, on both sides to the

the end. The knobs between the Legs are soft to the touch, like the Skin of an Egg. Their Legs are scaly, about three fingers breadth long, broader at their beginning, where they have knobs, and afterwards by degrees they grow narrower. Between the Scales on both sides the Knobs come out commonly three or four together, and look like Warts. When he swims in the Water he spreads out these Knobs on each side, just as a Bird doth his Feathers when it is going to fly. See Tab. P. at d.

Of the Second Starfish.

Besides this, another fine *Star-fish* came to my Hands, which rather ought to be called the *Coralfish*, because he is like Twigs of Coral, for which I took them also, before I perceived that he was alive. This is of a brighter colour than the other, for the other is dark red. Its Body hath ten corners, and it hath a Star above with as many Rays; each of these one may compare unto a Sail of the Windmills that the Children run against the Wind withal, or to a piece of such Crosses that are broad before, and narrow where they meet together; that is to say, of the shape of a Dove-tail: It feeleth rough: The lower part of the Body is very neat; in the middle thereof is a Star with six points, which I take to be his Mouth: About the Mouth he is soft, to the place where his Legs begin: Between the beginning of his Legs he had soft Cavities. His Legs are where they begin thick, and

and have in the middle a longish hollow or gutter, which feeleth soft ; on the Brim they are adorned with Scales that lye one over the other, no otherwise than if they were a row of Coral, but underneath the Scales are twisted, and have in the middle forwards small black Strokes, but the Scales lye over one another like unto the Plaits of the *Crawfish* : Besides, where the Legs come out of the Body, they spread themselves double into Twigs, and are, as is said before, hollow in the middle, until the place where they divide themselves into several Branches, and so grow slenderer by degrees. The undermost small Branches are scaley all round, but not twisted like Ropes ; they are sharp pointed on their ends like unto the Feet of a Spider, wherefore the Seamen call them Sea-spiders. When they swim in the Water they hold their Legs together, and so they row a long. I had one of this sort that was a span long, from the extremity of one Foot to the other ; but this I have delineated is less. The biggest are the handsomest for colour. They dye soon alter they are out of the Water, and when they are a dying they bend their Legs towards the Mouth. The Body, when it is dead, soon breaks to pieces, which is the reason that I could not keep the great ones. See Tab. P, at e. *Rondelations*, in his Book of Fish, hath delineated one of the same shape, but this is not the same species, for his is black ; neither do I find the Plaits in his, except he that drew it did not observe them.

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Some of both these sorts I got on the fifth of July, before the *Weihegat*, where a Whale made his escape from us, because the Line whereunto the Harpoon was fasten'd was entangled about a Rock: On this they hung, and so I got them alive.

CHAP. VI.

BEfore I come to treat of the Whale, I think it convenient to say something of some Finn'd Fishes, which I met withal in my Voyage to *Spitzbergen*, some whereof are propagated by the shooting of their Row, and others bear and bring forth young ones alive.

I will begin with the First kind, whereof the first that I met withal was the Fish that we call *Macarel*.

I. Of the Macarel.

This Fish is like unto a *Herring* in his shape, but hath on his Back a large Finn, and some what below it a very small one. Then lower there is another greater and broader one, but not so high as the uppermost: Undearneath this are five small ones, that are all of the same big-ness, and at an equal distance one from another. Very near to the Tail there is another less one; so that on the whole Back there is two great ones, and seven little ones. Near unto the Gills is a Finn on each side: Underneath

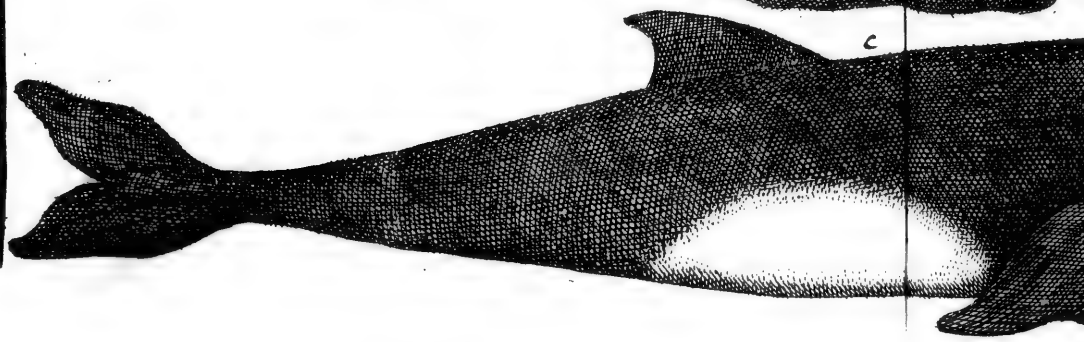
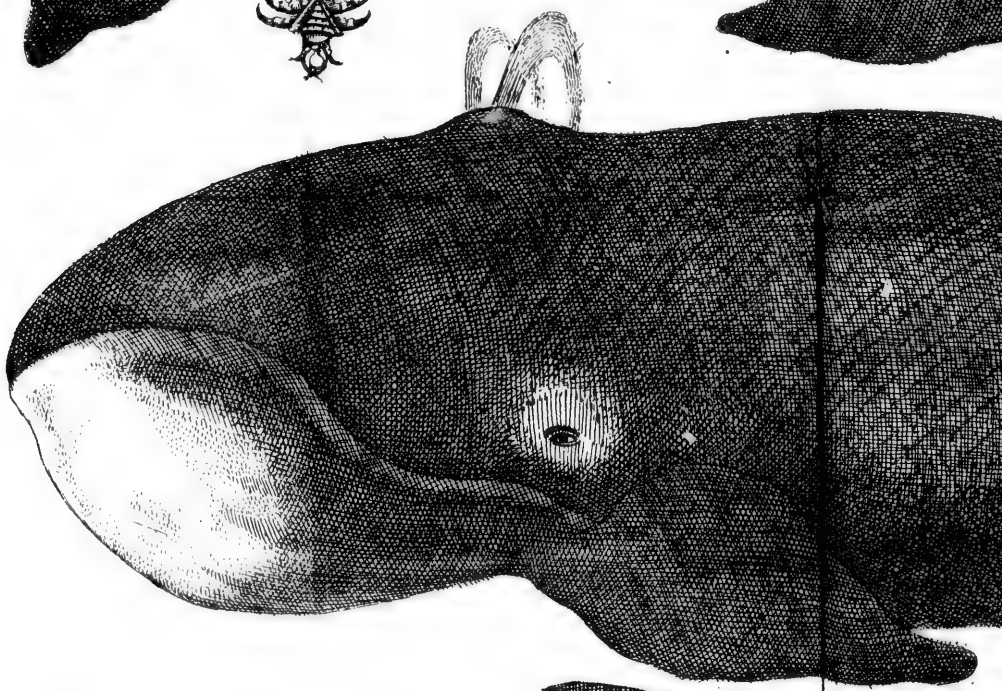
neath the Belly there are again on each side one almost of the same bigness of that that is near to the Gills. Underneath towards the Tail is one of the same bigness of the third on the Back. Behind this there are again five of an equal bigness; and below that still a less one so that those of the lower part of the Back are equal to those of the lower part of the Belly. Their Head is like unto that of a *Herring*. He hath a great many small holes on the Cover of his Gills, and also under neath the Eyes. They have a great variety of colours, that look more glorious when they are alive than when they are dead, for when they are a dying the colours fade and grow pale. From his Back towards the Side he hath black Stroaks. The uppermost part of his Back is blue till to the middle, and the other half underneath it is green and as if some blue did shine through it. Underneath his Belly he is as white as Silver, and his Fins are white every where. All the colours of this Fish shine like to a Silver or Golden Ground, done over with thin, transparent or illuminating colours. Their Eyes are black. It is the beautifullest Fish of all that ever I saw. This that I describe here was caught in the North Sea; afterwards, on the 27th day of *June*, in the Year 1673. we did catch four *Morays* behind *Scotland*, by the Island *St Kilda*, which were half blind; it is occasioned by a black Skin that groweth over the Eyes in the *Winter*, and cometh off again.

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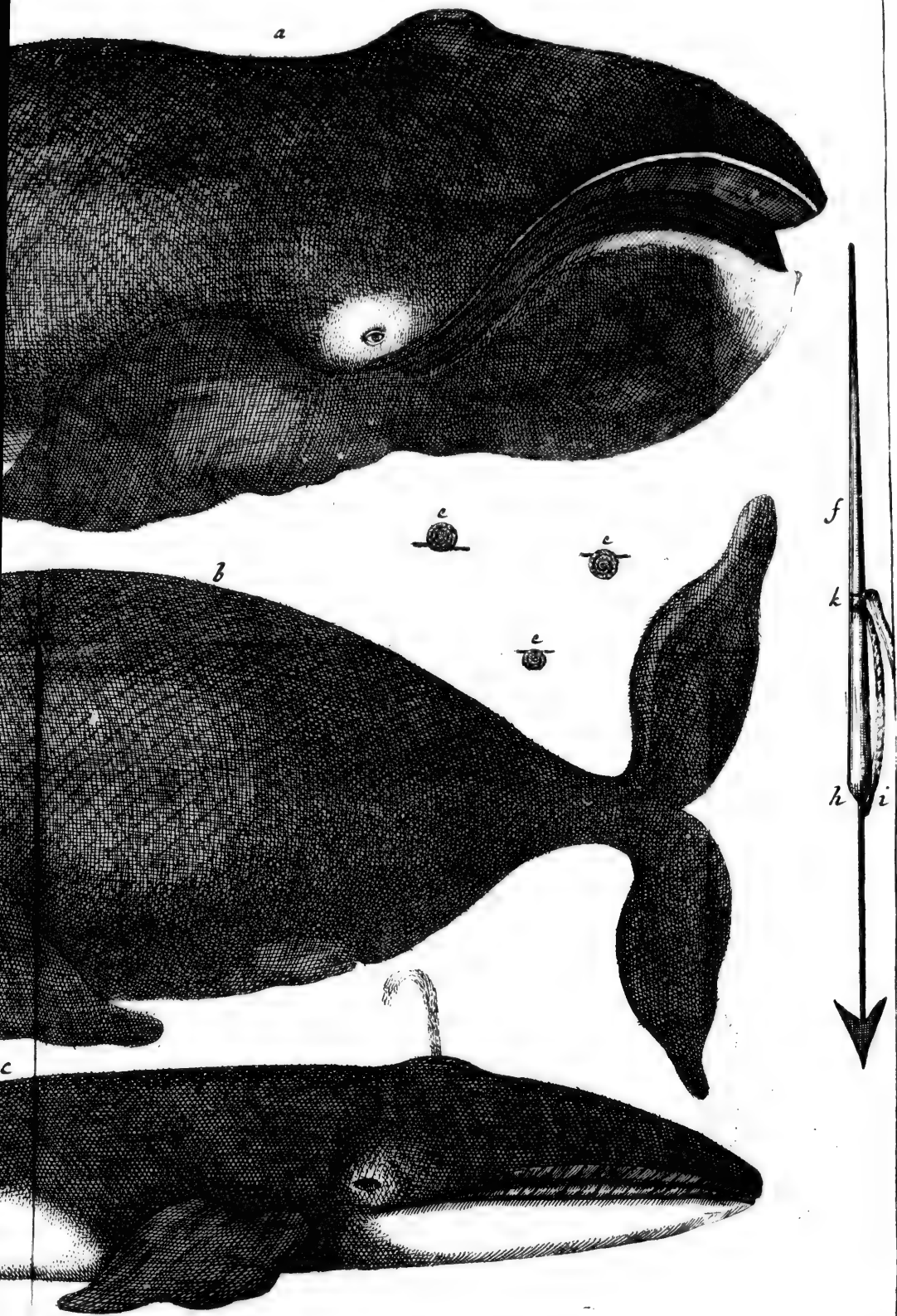
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the beginning of the Summer. We do not see them in the Winter, for they run towards the North: In the Summer we see them in the North Sea, and I have seen them also in *Spain*. We caught them after the following manner; we fastened a Bullet that weighed about two or three pounds to a Line, about a Fathom distance from the end, whereon we had fastened a Hook; this Hook we baited with a piece of a red Cloth, and so we flung it into the Sea, and towed it behind our Ship, then when the *Macarel* doth swiftly shoot at it, he bites upon the Hook, and so is hung, which you presently perceive by its pulling, as you do when you catch any other Fish, notwithstanding that the Rope of its own accord doth pull or draw very hard, by reason of the Sea, so that if you should rowl it about your Hand, it would benumb your Hand in a little time to that degree, that you would not be sensible, if one should cut it; wherefore they rye their Ropes to the carved Work on the Stern of the Ship, so that sometimes many of them are tyed to the Ship by one another, when the Ship sails apace, but this doth hinder the Ship very much in its sailing, and I dare say two such Ropes draw as much as a Man's Strength. They catch them also with *Herring*, with a piece whereof they bait the Hook, at which they bite sooner than at a red piece of Rag or Cloth. They eat best if you boil, or broil, or roast them fresh as they are caught, or dry them: They are hard to be digested.

II. *Of the Dragon-fish.*

Is is peculiar to this Fish to have two Finns on his Back, the foremost whereof hath a very long Strings, about two inches high above the Back; the hindmost Finn of the Back is not so high, but yet it goeth a great way all along the Back, and hath no such Strings. He hath no Gills, in the room of them he hath two blowing holes in his Neck, and on each side of these holes there are two short Finns, and underneath these, on each side a broad one: Underneath his Belly he hath a long very narrow Finn, that reaches to the Tail. His Head is oblong, compos'd of many Bones: He hath before on his Nose a rais'd part: His Tail is about an inch broad: His Body is long, thin and roundish, of a greyish silver Colour, and shining: His Shape is likest to that of a young Hay, as well the Head as the rest of the Body. They are caught between the *Bears-Island* and *Spitzbergen*. We got one off of *Hittland*, when our Cook flung out his Bucket for Water, in which he took up one with some small Fish of the shape of an *Herring*, but they were not bigger than a joint of your little Finger. Our Seamen inform'd me of some other small Fish, that were in the deep holes between the high Mountains in the *South Haven*.

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III. Of the Dolphin.

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This is also a common Fish, because we see them in great Numbers, every where in the Sea, chiefly before a Storm or hard Weather, for then they jump in great Numbers out of the Sea, like *Seals*. The Head of it, chiefly the Nose, is very like that of the *Place's* Head. Its Mouth is full of little sharp Teeth. It hath a Finn on the middle of his Back, which is hollow'd out toward the Tail, like an half-Moon. On its Belly are two Fins, like those of the Whale; these Fins are not like them of small or little Fishes, that are boney, join'd together with a thin Skin, but they are all over fleshy, and covered with a thick Skin, and made of jointed Bones within. The Tail is broad, and of the same shape as that of the Whale, but it is not cut in, and is crooked from one end to the other, like a Sickle. He hath two small round Eyes. The greatest part of the Body is of a black colour, but the Belly is white; they are five or six Feet long. They run very swift against the Wind, as an Arrow: They are generally caught by chance. Because Figures thereof are in other Books, I did not think it convenient to delineate him.

IV. Of the Butskopf, or *Place's* Head.

The *Butskopf's* Head is blunt before, whereon is a Bill or Beak of an equal bigness all along,

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which distinguishes him from the *Dolphin*, which is thicker behind, and more pointed before. The Fins are like those of the *Dolphin*, but the foremost on his Belly are liker those of the Whale; its Tail is also liker a Whale's. He hath a *Spout hole* above in his Neck, whereout he spouts the Water, but not with such a strength, nor so high as a Whale doth. There is also a difference in the sound of the Fishes, for this, when he bloweth out Water, makes but a small noise, but the blowing of a Whale reacheth that you may hear it afar off. His Eyes are very small in proportion to his bigness. I have seen them sixteen, eighteen, and some times twenty foot long. Their Back is of a brown colour; the Head brown and marbled; underneath their Belly they are white. They swim very near unto the Ships, so that one may pass them with a Stick, and they keep up with a Ship for a long time, which other Fishes do not, for when they see the Ships they are afraid of them. They all swim against the Wind, as *Whales*, *Finn-fish*, and *Dolphins*. I am of opinion, that they endeavour to run away from the Storm, and that they find some Part or other in their Bodies some Days before, to which place some Fish tumble about twelve Days before, which I do not take to be the same, and this generally continues until the Storm comes, and then they are cast away. We saw a great many of them, but might not catch any. I heard it said is quite different, and have a Christian Name.

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times higher than the other *Batskopf* has; they are somewhat of a darker brown Colour, but of the same bigness. We saw them tumble several times out of the Water; one might easily take them, because of their high Finn that stands on the top of their Back. They are not *Sword-fish*, nor of the same kind we call *Tumblers*, which we see between the *Elbe* and the *Hilgeland*.

V. Of the White-fish.

I do not by this Name mean the Fish we call so here in our Country, that are but small, but I mean a bigger sort, as large as a *Batskopf*, in shape like a Whale, and without Fins on his Back; he hath two Fins on his Belly, as I am informed by others that have caught them. The Tail is like unto a Whale's. He hath a *Spout-hole* on his Head; he hath also on his Head on his Head like a Whale. He is of yellowish white colour. He hath Fat enough in proportion to his bigness; I was told by them that had caught one, that they did fill a Barrel of Fat from one; but this Fat is very soft, and the Harpoon easily breaks out, wherefore they do not care to catch them. When we see plenty of them, the Skippers say, it is a sign of a good Year for catching of Whales; for, if these find good Food, the Whales find the same also. We saw on the 19th of *June* some hundreds of them.

VI. *Of the Unicorn.*

The *Unicorn* is but seldom seen in these parts, neither had I the good Fortune to meet with one in all my Voyage; and yet sometimes many of them are seen. I do not find that the Cuts that I have seen in some Books agree with the description that I heard thereof: for I was inform'd, that he hath no Fin on his Back, as he is drawn, he hath also a *Spout-hole* in his Neck. When they swim swiftly in the Water they say that they hold up their Horns, or rather Teeth, out of the Water, and so go in great shoals. The shape of their Body is like a *Seal*; the undermost Finns, and the Tail, are like unto those of the *Whale*. The Skin of some of them is black, some like a grey dappled Horse; underneath their Belly they are white. They are from sixteen to twenty foot long. They swim very swiftly, that although they are seen, yet they are but seldom caught.

VII. *Of the Saw-fish, sometimes called the Sword-fish.*

This Fish hath his Name from a Saw, which is a long broad Bone fixed to his Nose, that runs on each side many pointed Teeth or Peggs, like a Comb. He hath two Finns on his Back, the undermost of them is like the *Batskeps*, the uppermost hath behind, towards the Tail a hollownes like unto a Sickle. Underneath

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Belly he hath four, on each side two, the upper-
most thereof towards the Head are the broadest
and longest, but the lowermost are somewhat
shorter and narrower; they stand directly un-
derneath the uppermost Fins of the Back.
The Tail is like unto a piece of Board, where-
on the Dyers widen or stretch their Stockings,
which is pointed behind and underneath. The
Tail is not divided, &c. Towards the under-
most Finn of the Back the Tail is thinner.
The other Shape from the top to the Tail, is
like a Man's naked Arm. The Nostrils are
oblong. The Eyes stand high out of his Head.
Their Mouths are just directly underneath the
Eyes. They are in bigness from two to twenty
foot.

These *Saw* or *Sword-fish* are great Enemies to
the *Whale* and *Finn-fish*. Many of them gather
about him, and they do not leave the *Whale* un-
til they have killed him, then they eat of him
only the Tongue, all the rest they leave behind
them, as doth appear by the *Whales* that are
killed by the *Sword-fish*. I saw my self, in our
Home-voyage or Return, a Fight between a
Whale and a *Swordfish*, where both of them
made a great bustle, beating and jumping
about, and I understood that in calm Weather
the Seamen let them alone until the *Whale* be
killed, where they take him without any trou-
ble. But if they set out their Long-boats after
the *Whale*, they frighten the *Swordfish*, and so
the *Whale* escapes.

VIII.

VIII. *Of the Hay.*

There are several sorts of them; they have two Finns on their Backs, the highest whereof is like to the uppermost of the *Butskopf*, but the lowermost is of an equal breadth at the top and bottom, but it is hollowed out like a Sickle: He hath six Finns underneath his Belly, whereof the foremost two are the longest, and shaped like a Tongue, but the two middlemost are somewhat broader than those towards the Tail, and of the same shape; the two last underneath by the Tail are of an equal breadth from top to bottom, something shorter than the middle ones. The Tail is of a peculiar shape, like unto one half part of that of the *Sword-fish*, but it is split below; and the other part is like a Leaf of a Lilly. He hath a long Nose. The whole Fish is long, round and thin, and he is thickest towards the Head: His Mouth is shap'd as that of the *Sword-fish*; it is full of sharp Teeth, three upper and three under rows, one by the other. His Eyes stand something more out before than behind, after the same fashion as those of the *Swordfish*, they are oblong, and very clear. He hath five Gills on each side, as the *Swordfish*. His Skin is hard and thick, and rough if you touch it or strike it upwards; it is of a greyish colour; they are from one fathom long to three: It is a very devouring Fish, and bites great pieces from the *Whale*, as if they had been dug

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dug out with Shovels. They devour of many
Whales all the Fat underneath the Water, and
this is the reason that the Seamen say, *They have*
caught half a Whale that was dead. And the
Birds do help them also, and what is not ta-
ken a way underneath, ferments out of the top.
They have a large Liver, whereof they make
Oyl. Out of their Backs we cut the Flesh, which
we hang up for some days in the open Air,
then we boil and roast it, and this tastes very
well, when we have nothing that is better.
They do not sling away the *Hays* in *Spain*, but
sell them: The little ones are the best. They
are very eager after Man's Flesh, and eat many
a Man that goeth to swim or wash in the Sea,
whereof we have many Instances. They are
easily caught after the following manner; we
take a great Hook fastned to a strong Iron
Chain, baited with a piece of Flesh, and let it hang
down into the Sea; the *Hay*, as soon as he doth
perceive it, snaps at it, and is catch'd; but
when the *Hay* perceives that he is fast, he doth
use his utmost endeavour to bite off the Hook,
which he cannot for the Iron.

C H A P. VII.

Of the Whale.

THE Fish properly called the *Whale*, for whose sake our Ships chiefly undertake the Voyage to *Spitzbergen*, is differing from other *Whales* in his Finns and Mouth, which is without Teeth, but instead thereof long, black, somewhat broad, and horny Flakes, all jagged like Hairs: he differs from the Finn-fish in his Finns, for the Finn-fish hath a great Fin on his Back; but the Whale, properly so called, hath none on his Back; and there is two Finns behind his Eyes of a bigness proportionable to the Whale, covered with a thick black Skin, delicately marbled with white Strokes, or as you see in Marble, Trees, Houses, or the like things represented. In the Tail of one of the Fishes was marbled very delicately this number 1222 very even and exact, as if they had been painted upon it on purpose. This marbling on the Whale is like Veins in a piece of Wood, that run straight through, or else round about the center or pith of a Tree; and so go both white and yellow strokes, through the thick and the thin strokes, that is like Parchment or Vellum, and give to the Whale an incomparable Beauty and Ornament. When these Bones are cut up, you find underneath the thick Skin Bones that look like unto a Man's Thighs.

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when it is opened, and the Fingers are expanded or spread, between these Joynts there are stiff Sinews, which fly up and rebound again if you fling them hard against the Ground, as the Sinews of great Fish, as of a Sturgeon, or of some four footed Beasts generally do. You may cut pieces of these Sinews of the bigness of your Head, they squeeze together when thrown on the Ground, and so rebound very high, and as swift as an Arrow from the String of a long Bow. The Whale hath no other Finns but these two wherewith he steers himself, as a Boat is rowed with two Oars.

Their Tail doth not stand up as the Tails of almost any other Fish, but it doth lye horizontal, as that of the *Finn-Fish*, *Butskopf*, *Dolphin*, and the like, and it is three, three and an half, and four fathoms broad. The Head is the third part of the Fish, and some have bigger Heads; on the upper and under Lip are short Hairs before. Their Lips are quite plain, somewhat bended like an S, and they end underneath the Eyes before the two Finns: Above the uppermost bended Lip he hath black Streaks, some are darkish brown, and they are crooked as the Lips are. Their Lips are smooth, and quite black, round like the quarter of a Circle; when they draw them together they lock into one another: Within, on the uppermost Lip is the Whale bone, of a brown, black, and yellow colour, with streaks of several colours, as the Bones of a *Finn Fish*. The Whale-bones of some Whales are blue, and light blue, which

which two are reckoned to come from young Whales. In one of my Cutts here you may see the Whale-bone in the Tab. 2 marked with a. In the other Cutt, where his Mout his shut up, you do not see the Whale-bone. Just before, on the upper Lip, is a cavity or hole which the upper Lip fits exactly into, as a Knife into a Sheath. I do really believe, that he draws the Water that he bloweth out through this hole, and so I have been informed also by Seamen.

Within his Mouth is the Whale-bone, all hairy as a Horse's Hair, as it is also in the *fin*, and it hangs down from both sides all above his Tongue. The Whale-bone of some Whales is somewhat bended like unto a Cimeter, or others like unto a half-Moon.

The smallest Whale-bone is before, in his Mouth, and behind towards his Throat: and the middlemost is the greatest and longest, it is sometimes about two or three Men's length from whence you may easily conjecture how large this Fish must be. On one side, all in a row, there is two hundred and fifty peeces of Whale-bone; and as many also on the other side, which maketh five hundred in all, and there is more over and above this number, for they let the least Whale-bone of all remain, because they cannot well come at it to cut it out, because it is very narrow where the two Lips meet together. The Whale-bone is in a flat row one piece by the other, somewhat bended within, and towards the Lips every where like a half-Moon.

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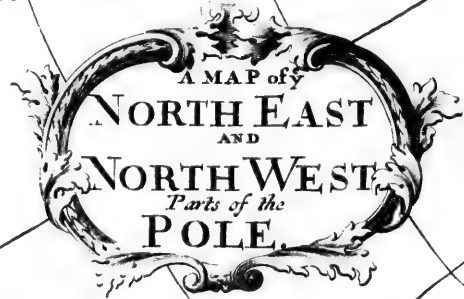
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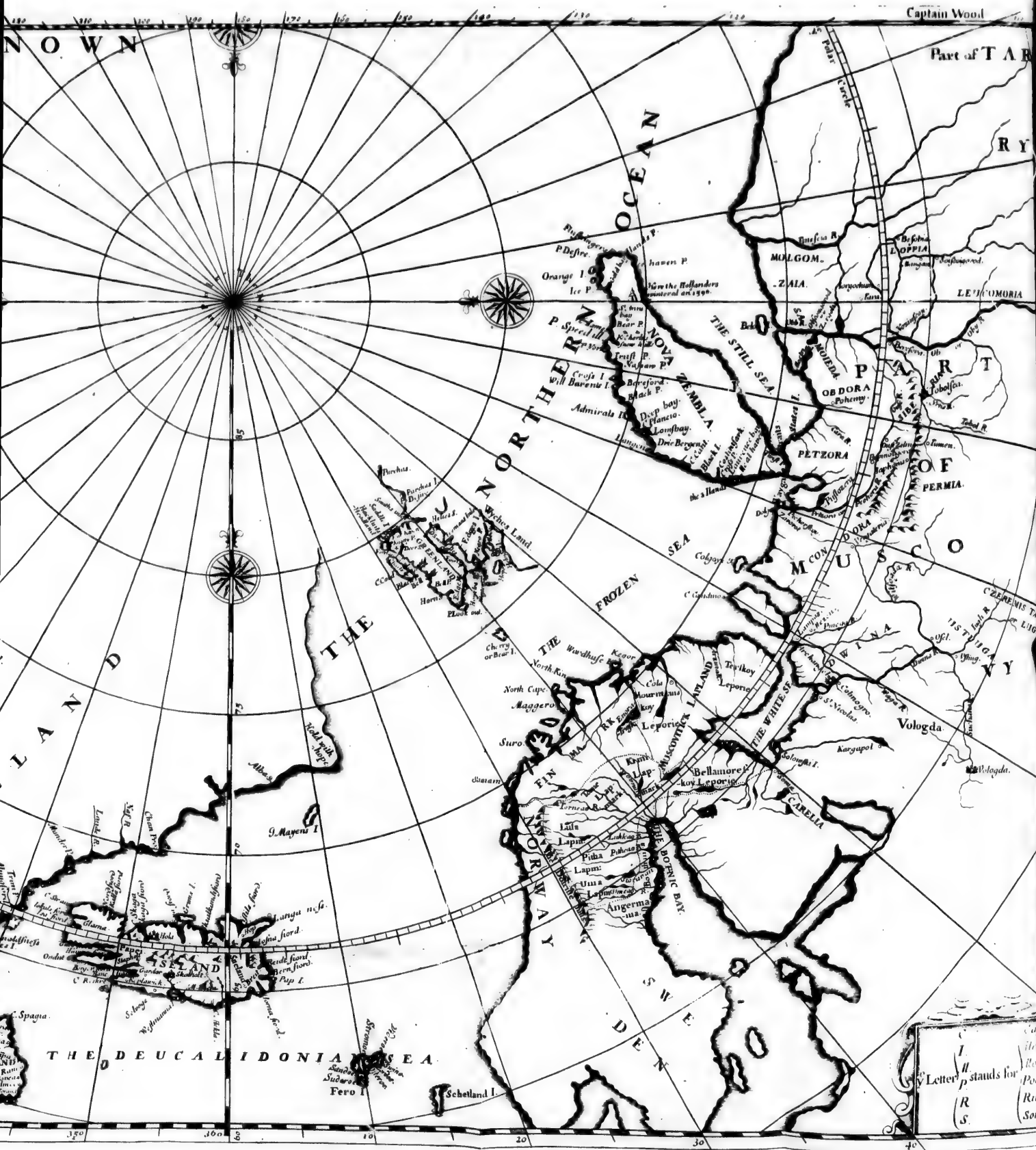
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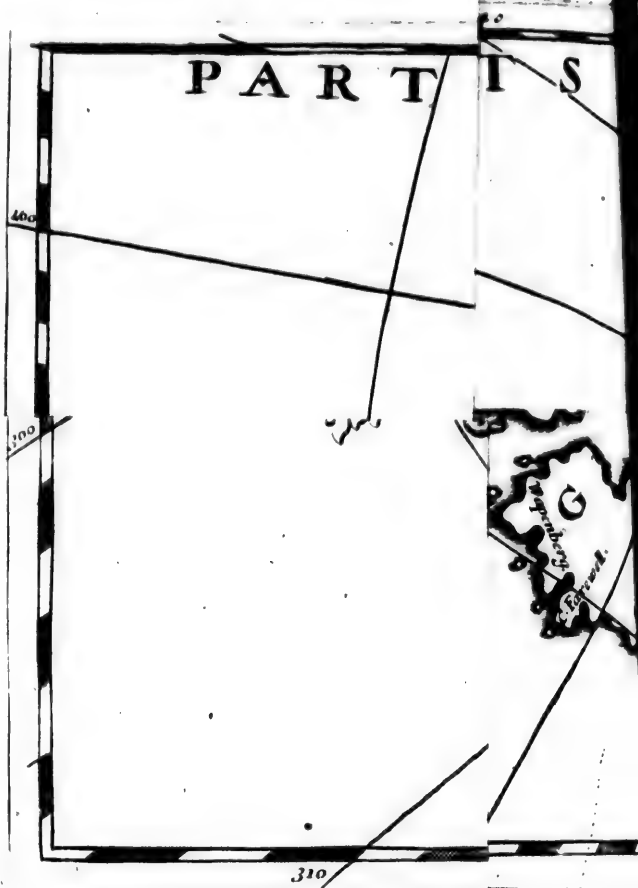
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The Whale-bone is broad at the top, where it sticketh fast to the upper Lip, every where overgrown with hard and white Sinews towards the Root, so that between two pieces of Whale-bone you may put in your Hand. These white Sinews look like boiled *Sea-catts* or *Black-fish* (in Spanish called *Cattula la Mar*) they are of a pleasant Smell, so that we might eat of them; they are not tough at all, but break as easily as Cheese, but they did not taste so well; when they putrifie or rot they smell horribly, just like unto a foul or rotten Tooth. Where the Whale-bone is broadest, as underneath by the Root, there groweth small Whale-bones, the other greater, as you see small and large Trees one amongst the other in a Wood. I believe the small Whale-bone doth not grow bigger, as one might think that some of the great pieces thereof might come out, and that so this small Whale-bone might grow up again in the room thereof, or as in Children the Hair grows again when cut off; but it is not so, for this Whale-bone is quite another sort, for it is from one end to to'ther of an equal thickness, and full of long Jacks like Horses Hair. The Whale-bone is underneath narrow and pointed, and all overgrown with Hair, that it may not hurt that that is young: But without the Whale-bone hath a Cavity, for it is turned just like unto a Gutter wherein the Water runs, where it lyeth one over the other, as the Shields or Plaits of *Craw-fish*, or the Pan-tiles of an House that lye one over the other, for else it might easily

easily wound or hurt the under Lips. I am of opinion that one might use Whale bone in any thing that we use Boards for, for they make of Whale-bone, Boxes, Knife-hafts, Walking-sticks, and the like. I should think that out of the Hair of the Fish might be made something, as the *Spaniards* do out of the wild *Semper-vive Aloes* (by them called *Savila*) they prepare it like Flax or Hemp, and so make Packthreads, Cloths and the like Manufactures of it.

To cut the Whale-bones out is also a peculiar Trade, and abundance of Iron-Tools belong thereunto. The lower part of the Whale's Mouth is commonly white. The Tongue lyeth among the Whale-bones; it is very close tyed to the undermost Chap or Lip; it is very large and white, with black spots at the edges: It is a soft spongy Fat, which cannot easily be cut; it makes a great deal of work to the Cutter (for so they call the Man that doth cut the Fat into small pieces with a large Knife, which cannot well be done with other Knives, because it is tough and soft) wherefore they sling the Tongue away, else they might get five, six or seven Barrels of Train-oyl out of it; but, as I said before, they sling it away, because of its softness; and this is the most pleasing Food for the *Sword fish*. Upon his Head is the Hovel or Bump before the Eyes and Finns: At the top of this Bump, on each side, is a Spout-hole, two over-against one another, which are bended on each side like an S, or as the hole that is cut on a Violin, whereout he doth blow the

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Water very fiercely, that it roars like a hollow
Wind which we hear when the Wind blow-
eth into a Cave, or against the corner of a Board,
or like an Organ-pipe. This may be heard
at a leagues distance, although you do not see
him by reason of the thick and foggy Air.
The *Whale* bloweth or spouts the Water fier-
cest of all when he is wounded, then it sounds
as the roaring of the Sea in a great Storm,
and as we hear the Wind in a very hard Storm.
Behind this Bump the *Whale* is somewhat more
bended in than the *Finn-fish*, yet when they
swim you cannot well discern one from the other,
except you observe it very exactly, for it is
only the Finn on the *Finn-fish*'s Back that di-
stinguishes him from the *Whale*. The Head
of the *Whale* is not round at the top, but some-
what flat, and goeth down sloping, like unto
the tiling of an House, to the under Lip.
The under Lip is broader than the *Whale* is
in any part of the Body, and broadest in the
middle; before and behind it is something
narrower, according to the shape of the Head.
In one word, all the whole Fish is shaped like un-
to a Shoemaker's Last, if you look upon it from
beneath. Behind the Knob or Bump where
the Finns are, between that and the Finns, are
his Eyes, which are not much bigger than those
of a Bullock, with Eye-lids and Hair, like
Mens Eyes. The Chrystal of the Eye is not
much bigger than a Pea, clear, white, and tran-
parent as Chrystal; the colour of some is yel-
lowish, of others quite white: The *Seale*'s are

three times as big as those of the *Whale*. The Eyes of the *Whale* are placed very low, almost at the end of the upper Lip. Some bring along with them from *Spitzbergen* some Bones, which they pretend to be the Ears of the *Whale*; but I can say nothing to this, because I never saw any; but thus much I do remember, that I have heard them say that they lye very deep.

The *Whale* doth not hear when he spouts the Water, wherefore he is easiest to be struck at that time. His Belly and Back are quite red and underneath the Belly they are commonly white, yet some of them are Coal black; most of them that I saw were white. They look very beautiful when the Sun shines upon them the small clear Waves of the Sea that are over him glisten like Silver. Some of them are marbled on their Back and Tail. Where he hath been wounded there remaineth always a white Scar. I understood of one of our Harpooniers that he once caught a *Whale* at *Spitzbergen* that was white all over. Half white I have seen some, but one above the rest, which was a Female, was a beautiful one; she was all over marbled black and yellow: Those that are black are not all of the same colour, for some of them are as black as Velter, others of a Coal black, others of the colour of a *Tench*. When they are well they are as slippery as an Eel but one may stand upon them, because they are so soft, that the Flesh thereof giveth way to our weight: And the outward Skin is thin, like Parchment, and is easily pulled off with one

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whether the Skin is thus burnt by the inward
heat of the Fish when he lies dry a floating
upon the Water. The Sun beams seem not to
have so great power as to dry the Skin so.
We found our first *Whale* was so much heated
by his hard swimming that he stunk alive; we
could pull off great pieces of the Skin, of the
length of a Man, which we could not do to
other Fishes that were not so much heated:
But from *Whales* that have been dead some
days, and are dry, where also the Sun shines
upon them, or when it doth not rain, one may
pull off a great deal of the Skin, but it stinks
as of Train-oil, or Fat, that ferments thro'
the Pores of the Skin. I know not what use to
make of this Skin, but I have seen Women tie
their Flax with it about the Distaff.

The *Whale* loseth his beautiful white colour
when it groweth dry, for before there is more
black amongst it, which makes the white shew
the better, neither doth the black look so well
after it is dry, for it groweth then brownish.
When you hold the Skin against the light, you
see many small Pores in it, where the Sweat co-
meth through.

The Yard of the *Whale* is a strong Sinew,
and according as they are in bigness, fix, seven
eight foot long, as I have seen my self.
Where this Yard is fixed the Skin is doubled,
that it lies just like a Knife in a Sheath,
where you can see nothing of the Knife but
only a little of the Haft. The part of Genera-

tion in the Female is just shaped like as that of four-legged Beasts. At the sides of *Pudendum* stand out the two Breasts, with Nipples on them, like unto those of Cows: Some of these Breasts are quite white, some are speckled with black and blue Spots, like a *Lapwing's* Eggs. When they have no young ones they have but small Breasts. I am inform'd, that when they couple together they stand upright, close to one another, with their Heads out of the Water, which seemeth very probable, because they cannot keep long under Water, and chiefly in such a heat. They say that they have but two young ones at a time, for they have never found more than two young ones within them. How long they carry their young is not easily determin'd; some say they go as long as a Cow, but it is very uncertain, he that will believe it may. The Sperm of a *Whale*, when it is fresh smells like Wheaten-flower that is boiled in Water, when it is still hot it is very white, one may draw it out in Threads like hot Sealing-wax, Glew, or the like; when it groweth cold it turns to a Musk-colour, and smells strong, and little red Worms grow in it, like unto the grey ones, that you may see in Tab. P. marked with C. I have try'd several ways to keep this Sperm sweet and fresh, but I could never make it like unto that *Sperma-ceti* which the *Apothecaries* sell in their Shops. One may draw off this Sperm whole Pails full out of the Water, for as well this as that of the *Sea-horses* and *Sea* swims upon the Sea like Fat, and we see abundance

like as that of the *Pudendum* make the Sea all foul and slimy. I try'd to dry this Sperm of a *Whale* in the Sun, and it look'd like Snot, and when the thin Slime was dry'd away from it, look'd like to *Fila meteorica*, save only that they are thicker and more heavy. Another parcel I boil'd in Sea-water, just as I took it out of the Water, until the Water was evaporated from it, then I had some Sea-salt, and a nasty brown Slime. The third parcel I boil'd in fresh Water, and afterwards again in Sea Water, and the longer I kept it afterwards the more it stunk, and the harder it grew. The fourth parcel I intended to keep in the salt-Water, with an intention to carry it along with me to *Hamburgh*, but it dissolv'd in the Water, as long as a Cow-like Glew, and the Water became foul and stinking, so that I could no ways make it like the *Sperma-ceti* of the *Apothecaries*. Where the Ward doth begin it is four-square, consisting of many strong Sinews; if you dry them they are as transparent as Fish-Glew; out of these Sinews the Seamen make twisted Whips. Their Bones are hard, like unto them of great four-footed Beasts, but porous, like unto a Sponge, and filled with Marrow, when that is consum'd out, they will hold a great deal of Water, for the holes are big, like unto the Wax of a Honey-comb. Two great and strong Bones hold up the under-Lip, they lie one against the other, and both of them make a Figure like unto an Half-moon, but one alone by it self makes a Figure like to a quarter of the Moon. Some of these

these Bones I saw at *Spitzbergen*, lying on the *Sstrand*, about 20 foot long, of a very white colour, as if they had been calcined. Our Seamen bring some of these along with them home, to shew us how big some *Whales* are, which are already whitened to their Hands, for those that come fresh from a *Whale*, stink abominably, because of the Marrow that is in them. Their Flesh is course and hard, and it doth look like unto that of a Bull; it is intermix'd with many Sinews; it is very dry and lean when it is boiled, because their Fat is only between their Flesh and Skin: Some looks green and blue as our powder'd Beef, chiefly where the Muscles meet together; if one lets it lie a little, it grows black and stinking. The Flesh of the Tail boils tenderest, and is not quite so dry as that of the Body. When we have a mind to eat of a *Whale*, we cut great pieces off before the Tail where it is four-square, and boil it like other Meat; good Beef I prefer far before it, yet rather than be starv'd, I advise to eat *Whale's Flesh*, for none of our Men dy'd of it, and the *Frenchmen* did eat almost daily of it, they sling it sometimes on the tops of their Tubs, and let it lie until it is black, and yet they eat it for all that. The Flesh of a *Whale*, as well as that of the *Seales*, is alone by it self, and the Fat at the top thereof, between the Flesh and Skin. It is about six Inches thick on the Back and Belly, but I have also seen it a Foot thick upon the Fin, according as they are great or little Fish. The Fat of their under Lip is thicker than two

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Foot, and is the thickest of all the *Whale*. The Tongue, as I have said before, is fastned to it, but very soft, but it costs too much labour to cut it. The Fat of some *Whales* is much thicker than that of others, as it is with other Animals or Men, where one is much leaner than another. In the Fat are little Sinews interspers'd, which hold the Oyl, as a Sponge does Water, which one may squeeze out: The other strong Sinews are chiefly about the Tail, where it is thinnest, for with it he turns and winds himself, as a Ship is turn'd by the Rudder, but his Finns are his Oars, and according to his bigness he rows himself along with them as swiftly as a Bird flies, and doth make a long track in the Sea, as a great Ship doth when under sail, so that it remains divided for a while.

The *Whales of the North Cape* (they are so called, because they are caught between *Spitzbergen* and *Norway*) being not so big, therefore do not yield so much Fat as those of *Spitzbergen*, for of those of the *North Cape* you shall not fill above ten, twenty, or thirty Cardels of Fat; the middling sort of those of *Spitzbergen* yield commonly seventy, eighty or ninety, and they are about fifty or sixty foot long. Our biggest *Whale* was fifty three foot long, and we cut off him as much Fat as fill'd seventy Cardels; his Tail was about three fathom and an half broad. The Skipper *Peter Peterson* of *Friesland* inform'd me, that they found a dead *Whale*, whereof they did cut as much Fat as fill'd one hundred and thirty Cardels, his Tail was three fathom

and an half broad, but he was not much longer than our biggest, as one may guess by the Tail also, yet much thicker and fatter; from whence one may infer, that they do not grow much longer, but only in thickness or fatness, as we daily see: Nor did I ever hear that a bigger or better Whale was ever caught, and even those but seldom, for if there were many such, our Ships could not hold so much Fat as it cut from ten, fifteen or twenty *Whales*, as some of them have sometimes taken in.

Over the Fat is, besides the uppermost thin Skin already described, another Skin of about an inch thick, proportionable to the bigness of the *Whale*; it is colour'd according to the colour of the Fish; if the Fish be black, this undermost thick Skin is so; if the outmost Skin that is like Parchment is white or yellow, the thick one underneath it is of the same colour. This thick Skin is not stiff nor tough at all, so that one might dress it like Leather, but it dries just like unto the *Fungus* that grows on Elder, which we call *Jews-ears*, which are thick and turgid when they are green and fresh, but brittle when they are dried; whereforh this Skin is not esteem'd at all. This and the uppermost thin Skin that covers this, are the occasion that the *Whale*, which I take to be the strongest and biggest of all Creatures in the Water, cannot make use of his strength, because they are too soft to do much.

I have nothing to relate of the inward Parts of the *Whale*, but only that his Guts seem to be

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The Food of the *Whale*, as it is believed, are
the small Sea-snails, the Draught whereof you
may see at c, in the Tab. Q, whereof I have
made mention in another place, which some
take for Spiders; whether these afford such
great Nourishment, I cannot exactly tell. Some
say, that they live only by the Wind, but then
methinks they must have nothing in them but
Wind, which I found otherwise. I was infor-
med by others, that about *Hitland* a small *Whale*
was caught, had about a Barrel of *Herrings* in
his Belly. The are smaller *Whales* than those
we catch at *Spitzbergen*, but there is more dan-
ger in catching of them, they being less and
nimble than the great ones, to whom the
Water doth not so easily give way as to these,
for they jump and play in the Water, and keep
their Tail commonly above Water, so that one
dare not come near to them to launce them.
Concerning the *Whale's* Valour, we do find
that he is not very courageous, according to
his strength and bigness, for if he sees a Man
or a Long-boat, he goeth under Water, and
runs away. I did never see nor hear, that out
of his own Malice he endeavour'd to hurt any
Man, but when he is in danger; what then he
doth is of necessity, and then he doth not va-
lue a Man no more than a Sand, nor a Long-
boat, for he doth beat them all into Splinters.

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His Strength may be guess'd by the Fishermen that catch with great Nets other Fishes, when they are going to draw their Nets towards the Land, what a great Strength they must use, which is nothing at all to be compared to his Strength. The *Whale* doth swim sometimes away with some thousand fathoms of Rope-line, swifter a great deal than a Ship can sail, or a Bird can fly, so that it makes their Heads giddy; yet a great Ship is too many for him, for although he should strike against it with his Tail, yet it doth him more hurt than he does the Ship.

The *Whales* keep, in the Spring, Westward from *Spitzbergen*, near old *Greenland* and the Island of *John Majen*; then they run Eastwards to *Spitzbergen*: After them come the *Finn-fish*, and then there is no more *Whales* seen. It is probable they go after a tolerable cold place; for after that, I have seen *Finn-fish* in the *Spanish Sea* in the year 1671. in the Month of *December*, and in the Year 1672 in *January*, and also afterwards in the year 1673. in the *Straights of Gibraltar* in *March*, and also in the *Mediterranean*.

He swims against the Wind, as all other *Whales* or great Fish do. The *Sword-fish* is his mortal Enemy, he might rather be called *Comb-fish*, because his long Tooth is on each side full of Teeth or Prickles, most like a Comb. In our Home-Voyage to *Hamburg* I saw an Example of this Emnity of a *North-caper Whale* and a *Sword-fish*, near to *Hitland*, they faught and struck

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struck at one another so vehemently, that the Water flew about like Dust, sometimes one, and sometimes the other was uppermost; the Weather was a little stormy, or else we had staid to have seen the end of the Battle, so we were forc'd to leave them.

The dead *Whale* kill'd by the *Sword-fish* stinks at a great distance, but not presently, and those that have been wounded some days before they are caught smell the worst, and drive high above the Sea-water, when others drive even with the Water; and some sink.

The *Whales* have, as well as other Beasts, their peculiar Distempers and Ailments, but I can only write of what I know by Hear-say. An ancient and experienc'd Harpoonier inform'd me, that he did once catch a *Whale* that was very feeble, and that all his Skin, but chiefly near unto the Tail and Fins, hung like Films, as if they were old Rags dragg'd along behind him, and that he was quite lean, so they made but very little Train-oyl of his Fat, for the Fat was quite white, and light withal as an empty Honeycomb. Before a Tempest they beat the Water, that it doth fly about like unto Dust, with their Tail; but they have the greatest strength when they strike side-wards as if they did mow, so that one might think that they were in a great agony, and a dying. They are mightily tormented by the Lice, whereof I have treated more at large above: The Draught of this Louse you may see at *d*, in the Tab. *Q*.

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The Wounds that are given unto the *Whale* by the Harpoons, into the fat, heal up again of their own accord, for the Salt-water cannot stick on it. Many *such Fishes* are caught that have been struck by others with a Harpoon, and are heal'd up again, and so have white Scars.

CHAP. V.

How they catch the Whale.

First, it is to be observ'd, that when its like to be a good Year to catch *Whales* in, there is many *white fish* to be seen before: But where we see many *Seales*, there we do not expect to meet with many *Whales*; for they say, that they eat up the Food of the *Whale*, wherefore the *Whales* will not stay in such empty places, but go to find out better, and so come to *Spitz-bergen*, for there, at the Shoar, we see great plenty of the small Sea-snails (you may see them mark'd with *e* in the Tab. Q) and perhaps some other small Fish. They are caught after the following manner: When they see *Whales*, or when they hear them blow or spout, they call in to the Ship, *Fall, fall*; then every Body must be ready to get into the Long-boat that he doth belong to, commonly six Men go into every Long-boat, and sometimes seven, according as the Long-boats are in bigness, they

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all of them row until they come very near unto the *Whale*, then doth the Harpoonier arise, who sits always before in the Boat, where the Harpoon, or the sharp Iron made like unto an Arrow fixed to a Stick, doth also lie on the foremost board of the Long-boat, which the Seamen call the *Staffen*, that is, the broad piece of Wood that cometh up before the Boat from the bottom, and stands up higher than all the rest. But when the *Whale* runs strait down towards the bottom underneath the Water, then he doth draw the Rope very hard, so that the upper part of the Long-boat is even with the surface of the Water; nay, he would certainly pull it down to the bottom, if they should not give him Rope enough: This he doth commonly where the Sea is deepest; and this doth require an incredible force to draw so many hundred fathoms of Rope under Water. This gives me occasion to remember, that when we on the 27th of *April*, in the Year 1672. did fling out our Lead, near *St. Kilda*, behind *Scotland*, into the Sea, where it was 120 fathom deep when the Weather was calm, and when we would pull it up again, it was so heavy that 20 Men had much to do to heave it. The Harpoonier taketh his Harpoon, and holds the Point, or the Iron thereof, together with the Rope or Line of five or seven fathom long, about an inch thick, and is laid up round like a Ring, that it may not hinder the Harpoon when it is flung, for as soon as he doth fling or dart the Harpoon, this Line follows; for it is
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more pliable than the rest that are fastned to it, wherewith they pursue the *Whale*. It is made of the finest and softest Hemp, and not daub'd with Tar, but it doth swell in the Water, and so it grows hard. The Harpooner darts his Harpoon with the Right hand at the Fish; as you may see by *m* in the Tab. *A*. When the *Whale* is hit with the Harpoon, all the Men that are in the Long-boat turn themselves about and look before them, and they lay their Oars nimbly upon the sides of the Long-boat. There is a Man in the Long-boat, whose business it is to look after the Rope; as you may see at *N*, in the Tab. *A*; for in each of these Long-boats there is a whole heap of Lines, between the two Seats or Benches; this Heap is divided into three, four or five parts, and each of them is of eighty, ninety, to one hundred fathoms long. The first of them is ty'd to the Fore-runner, or small Line; as the *Whale* runs under the Water, they tie more and more Line to it, and if in one Boat there should not be enough, they make use of those that are in the other Long-boats. These Ropes or Lines are thicker and stronger than the Fore-runner, and are made of strong and tough Hemp, and tarr'd over. The Line-furnisher, or the Man that doth look after the Ropes, and also the other Men that are in the Long-boat, must have great care that the Ropes or Lines may not be entangled when they run out so swift, or that they may not run towards the side of the Long-boat,

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boat, for then the Long-boat would be over-
set, and many Men lose their Lives, if other
Long-boats were not near to their Assistance.
The Line must run just before, in the middle
of the Long-boat, that is called the *Stave* by
the Seamen, and by reason of this strong and
violent Motion, the Wood and Rope would be
set on fire. But to prevent this, the Har-
poonier hath a wet Rag tied to a Stick (like un-
to a Mop) ready at hand, wherewith he wets
the Wood without ceasing. The other three
Men that are in the Long-boats take also care
of the Lines, as well when they are let out, as
when they are taken in again; and when they
cannot hold it with their Hands, they wind it
about the Staves of the Boat, and so they do stop
it from going any further. Another, that is cal-
led the Steerman, stands behind in the Long-
boat, as you may see by *o* in the Tab. *A*, and
steers the Boat with an Oar, and he takes great
Care, and minds the Rope, to see which way it
runs out, for if it doth go towards either side,
and doth not run just before over the Stave, he
so guides the Boat, that it may run exactly out
before. The Whale runs away with the Long-
boat as swift as the Wind. If the Harpoonier
can, he doth dart the Harpoon just behind the
Spout-hole of the Whale, or in the thick Fat of
his Back, where they also do launce him, for that
maketh him spout Blood sooner than if wound-
ed in any other place, and die sooner than if
you should launce them into their Belly, or
through the Guts. The first *Whale* we caught
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spouted Blood in such a quantity, that the Sea was tinged by it wherever he swam, whereunto the *Mallemucks* flock'd in great Numbers, as I have mentioned before. They also launce the Whales near their Privy-parts, if they can come at it; for if they are run in there, it doth pain them very much; nay, even when they are almost dead, if you run in your Launce thereabout, it causes the whole Bo^dy to tremble. For the most part they do not much mind where they launce or push them; for there is no time to take great Deliberation, but they strike at him as well as they can. But about the Head the Harpoon can do him no hurt, because the Fat is but very *thin* there upon the Bones, which the Whales know as well as we; for when they find themselves in danger, so that they cannot escape the Harpoon, they rather leave their Head than their Back undefended, for there the Harpoon breaks out easier, and so the Whale gets away, like one that hath no mind to fight any longer. The Use of the Harpoon is, to tye, as it were, the Whales with them, that they may not run away: It is shaped like an Arrow before, as you may see at *f*, in the Tab. *Q*: It hath two sharp Beards, they are sharp at the edge, and have a broad Back, like unto a Hatchet that is sharp before and blunt behind, or on the Back, so that it may not cut with its Back, for else it would tear out, and all your Labour would be lost. The Iron Handle is thicker behind than before, and it is hollow, whereinto they put the Stick, as
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you may see in the Tab. Q, marked with *b*. Be-
 fore this hollow part, the Fore-goer is fa-
 sten'd or ty'd, that is to say the foremost Rope,
 as you may see in the Tab Q, marked with *i*.
 Those are the best Harpoons that are made of
 clean and fine Steel, and are not hardened too
 much, so that you may bend it without inap-
 ping, for oftentimes Two hundred Pounds are
 lost (for a midling *Whale* is esteem'd at so much)
 in a minutes time for want of a good and well-
 temper'd Harpoon. The Wooden Stick is fa-
 stened within the Iron Collet or Funnel of the
 Harpoon, with Packthread wound all about
 the Iron; somewhat higher up, about two spans
 off, there is a hole made through the Stock, as
 you may see marked with *k*, in the Tab. Q.
 The Harpoon is light behind, and heavy to-
 wards the point, or before, like an Arrow, that
 is made heavy before with Iron, and light be-
 hind with Feathers, so that sling it which way
 you will, it doth fall always upon the point.
 Through this hole cometh a piece of Pack-
 thread, wherewith the end of the Fore-runner
 is fastened to the Handle or Stock of the Har-
 poon, but this is soon torn off, and it serveth
 for nothing more after the Harpoon sticks in
 the Body of the Whale; neither is the Wooden
 Handle of any further use, and so it doth soon
 come out from the Iron. When the Whale is
 struck with the Harpoon, all the other Long-
 boats row out before, and take notice which
 way the Line doth stand, and sometimes they
 pull at the Rope or Line (as you may see in
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the Tab. *A*. marked with *p*.) If it is stiff and heavy, the Whale doth draw it still with his might; but if it doth hang loose, so that the Long-boat is before and behind equally high out of the Water, then the Men pull in the Rope again, (as you may see in the Tab. *A*, marked with *q*) and the Rope-giver layeth it down in very good order (as you may see at *n*, in the Tab. *A*) round, and one row above the other, that if the *Whale* should draw on again, he may have it ready to give him without being entangled. Here is also this to be observed, that if the *Whale* runs upon the level they must not give him too much Rope, for if he should turn and wind himself much and often about, he might easily wind the Rope about a Rock or heavy Stone, and so fasten it to it, and so the Harpoon would come out, and all the Labour would be lost; which hath often hapned, and we our selves lost one that way. The other Long-boats that are towed behind, wherein the Men look all before them, and sit still, and let the *Whale* draw them along: If the Whale doth rowl upon the Ground, so that the Long-boats or Sloops lye still, they draw their Lines in again by degrees, and the Rope-master doth lay them down again in their proper places, as they had been laid before. When they kill the Whale with Launces, they also pull their Lines in again, untill they come near to the Whale, yet at some distance, that the others may have room to launce: But they must have great care, that all the Lines of every Sloop may not be

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be cut off together, because some *Whales* sink,
and others do swim even with the Water when
they are dead, which we can tell before-
hand, whether they will rise or no. The
The fat ones do not sink presently after they are
fresh killed, but the lean ones sink immediately
after they are dead, but after some few days
they come up again, and swim on the Water :
But it would be too long a while for a Man to
stay till he cometh up again, and the Sea is
never so quiet that one can stay long in the
same place, and where the Sea is quiet, and
without Waves, there the Stream doth carry
the Ships and the Ice along together, so that
we should be forced to leave the *Whale* unto
others, that would find him dead some days af-
ter. 'Tis true, this is the easiest way to catch
Whales, but it is very nasty and stinking work;
for long and white Maggots grow in their Flesh,
they are flat like unto Worms that breed in
Mens Bellies, and they smell worse than ever I
smelt any thing in my Life. The longer the
Whale lies dead in the Water, the higher he doth
swim above it ; some swim a foot high above
the Water, others to their middle, and then
they do burst easily, and give a very great re-
port. They begin immediately to stink, and
this encreases hourly, and their Flesh boils and
ferments like unto Beer or Ale, and holes break
in their Bellies, that their Guts come out. If
any Man is enclined to sore Eyes, this Vapour
enflames them immediately, as if Quicklime
was flung into them. But when the live *Whales*

rise and swim again, some of them are astonish'd, others wild or stark mad: To those that are wild we come softly or gently from behind, as we do when we are going to trapan them, for when the Wind is down, the Weather calm, and Air serene, so that the Sea doth not foam or roar, the *Whales* hear immediately the striking of the Oars.

If many small Ice-sheets lye near to one another, so that we cannot follow the *Whale* with our Sloops or Long-boats, we fetch in our Line with all might and strength, and if with one or more pulls we can fetch out the Harpoon it is well, if not, we chop off the Rope or Line. The *Whale* is best and surest struck with a Harpoon when he spouts Water, as is already said above, for we do observe, that when they lye still and very quiet, that they then listen, and are sometimes under, and sometimes above Water, so that their Back doth not quite dry, and before we are aware of it he flings up his Tail behind out of the Sea, and so bids us good-by; as you may see at s, in the Tab. A. The *Whales* may easily be caught when the Air is very serene and clear, and the Sea quiet, and where there float neither great nor small Ice-sheets, so that we may go in between them with our Boats or Sloops, to follow them; for at the Ice-fields the *Whales* do commonly lye and rub themselves at them, perhaps by reason of the Lice that bite them. Besides, against the Ice-sheets the Sea beats, dashes, and foams, with small cutting

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curling Waves, so that the *Whales* do not ob-
serve nor mind the striking of the Oars, and so
they are easily struck with the Harpoon. It is
very dangerous to kill a Female, chiefly when
she is big with young, for they defend them-
selves very long, and are harder to be kill'd
than a Male one. Oftentimes the Long-boats
wait six or seven Hours, nay, a whole day, for
a *Whale*, before they see one.

Where great quantity of small Ice is crowded
together, there it is also very dangerous, and
hard to come to the *Whale*, for he is so cun-
ning, that when he perceives where the Ice is
he retires thither immediately. The Harpoon-
ier stands at the Head of the Long-boat, and
doth draw on the Rope, as you may see at *p*,
in the Tab. *A*, to try whether it is heavy or
light; if it feels heavy, so that we are afraid
that it will pull the Boat under Water, then
we give him more Rope, if he runs strait out
before, he draweth the Sloops after him. If
he doth run underneath a great Ice-field, the
Harpoonier taketh a Knife in his Hand, as you
may see at *R*. in the Tab. *A*, which they call
the Chopping-knife, with which he cuts the Ice
hollow, or spongy, or full of holes, so that the
die, so that the *Whale* can fetch his breath
neath it, and so he may come up to the surface
of the Water, and so we may kill him. This is
the best way to kill a *Whale*, and it is the only
way to kill a *Whale* in the Ice. The Harpoon-
ier is the only person who is allowed to kill a
Whale, and he is the only person who is allowed
to chop the Ice hollow, or spongy, or full of holes,
so that the *Whale* can fetch his breath neath it,
and so he may come up to the surface of the Water,
and so we may kill him. This is the best way to
kill a *Whale*, and it is the only way to kill a
Whale in the Ice.

in the Body of the *Whale*, yet not without great loss, for oftentimes they run away with the Lines that belong to five and more Sloops. It happens very often, that they run to the Ice with the Long-boats, so that they dash against it, as if they would break it into pieces, which also very often happens. But when the *Whale* rises again, they oftentimes sling one or two more Harpoons into him, according as they find he is tired more or less, then he dives under Water again. Some swim or run even all along on the Water, and they play with their Tail and Finns, so that we must have great care that we may not come too near them. When the *Whales* sling their Tails about after this manner, they wind the Line about their Tail, so that we need not to fear the Harpoon tearing out, for then they are ty'd strong and firm enough with the Rope. After they are wounded, they spout with all their might and main, so that you may hear them as far off as you may a Cannon; but when they are quite tired, it cometh out only by drops, for he hath not strength enough to force the Water up, and therefore it sounds as if you held an empty Mug or Bottle under Water, and the Water runs into it. And this sound is a certain sign of his feebleness, and that he is going to expire. Some *Whales* blow Blood to the very last, after they have been wounded, and these dash the Men in the Long-boats most filthily, and dye the Sloops as red as if they were painted with a red colour; nay, the
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very Sea is tinged red all along where they swim. Those *Whales* that are mortally wounded heat themselves, that they reek while they are alive, and the Birds sit on them, and eat on them while they are still alive. When the *Whales* blow up the Water, they fling out with it some fattish Substance that floats upon the Sea like *Sperm*, and this Fat the *Mallemucks* devour greedily, of which several thousands attend him, so that a *Whale* often hath more Attendants than a King hath Servants; as you may see by *T*, in the Tab. *A*. Sometimes also the Harpoons break out; then often Long-boats of other Ships attend, and as soon as they see that the Harpoon is come out, they fling their own into him, and the *Whale* is theirs, altho' the first Harpoon hath almost kill'd the *Whale*, yet if he doth get loose, the second *Perty* claims him, and the first must look for another. Sometimes at the same time two Harpoons, belonging to two several Ships, are struck into the *Whale*, such ones are divided equally, and each one hath half; as you may see at *MM*, in the Tab. *A*; the other two, or three, or more Sloops, as many as there is of them, wait for the *Whales* coming up again, and when they see that he is tir'd, they kill him outright with *Launces*. In doing this is the greatest danger, for the first that do fling the Harpoon into him are drawn along by the *Whale*, and are at a good distance from him, but those that kill him with *Launces* are as well upon his Body as at his sides, according as the *Whale* turns

and winds himself, and they receive many severe Blows. Here the Steersman must take care to observe how the *Whale* runs and turns himself about, that the Harpooner may reach him with his Launces; all the other Men in the Sloops row diligently, sometimes forwards, and sometimes backwards, which they call *rowing on* and *striking*, and when the *Whale* lifts up himself out of the Water, he commonly doth strike about with his Tail and Finns, that the Water dasheth up like Dust. A Long-boat he values no more than Dust, for he can beat it all into shatters at a blow: But a great Ship is too hard for him, and if he strikes against it with his Tail, he feels it more than the Ship, for he doth so paint the Ship with his own Blood, that it maketh him very feeble. A good Steerman is next unto the Harpooner most useful in the Sloop; he steers with one Oar, and doth look out before; the other four Men turn their Back to the Head, and look towards the Stern, therefore doth the Steerman and Harpooner always cry, *Row on*, or *strike*, that is to say, row near to the *Whale*, or else keep farther off. The Launces have a Wooden Stick or Handle above two Fathoms long, or somewhat shorter than a Pikestaff; as in the Tab. *Q* you may see at *g*; the Iron thereof is commonly a Fathom long, and pointed before like unto a Pike; it is made of Steel or rough Iron, that it may bend without breaking: For after you have made a deep hole in his Body with your Launces, you poke into it with them

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one way and the other way, as they do when they poke for Eels, as you may see at Z, in the Tab. *A*; but if he doth get one or more out of your Hands, you take another, for every Sloop hath at least five, six or seven, and yet sometimes he has them all out of three, four, or more Boats sticking in his Body.

C H A P. VII.

What they do with the dead Whale.

AFTER the *Whale* is killed they cut off his Tail; some keep the Tail and Fins, and hang them up at the outside of their Ship, for that defends them from the Ice when it presseth upon the Ship: The Tail hinders the Boat in its course, because it doth lyve, and that is the reason why they cut it off. Before the Tail they fasten a piece of a Rope, and at the other end at the Stern of the last sloop, as you may see in the Tab. *A*, marked with *W*. There is in all four or five Sloops fastened to one another behind, and so they row one behind the other to the great Ship. When they have brought the *Whale* to the Ship, they tye it with Ropes fast to the Ship; that part where the Tail is cut off they fasten to the fore-part of the Ship, and the Head towards the Stern, about the middle, near the great Shrowds of the Mainmast on the Larboard of the Ship; it



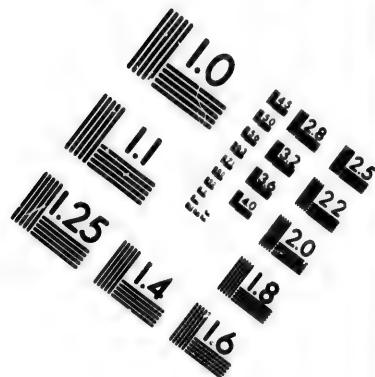
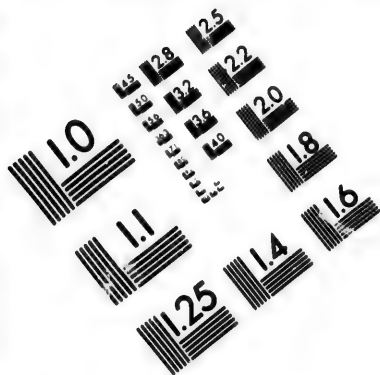
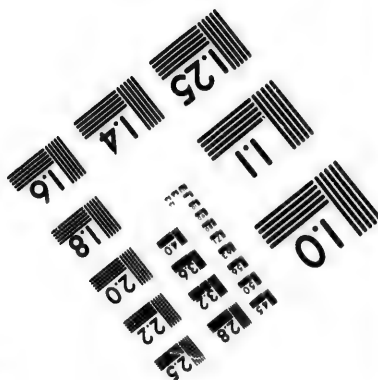
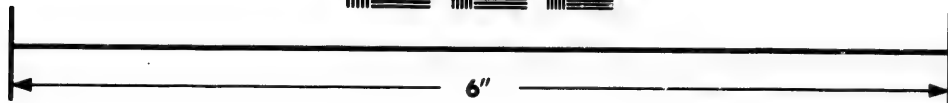
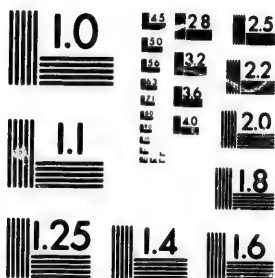


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is seldom that a *Whale* doth reach farther than from the Poop to the middle of the Ship, except the Vessels are very small; as you may see at X, in the Tab. A.

By the Larboard is to be understood that side of the Ship that is at your Right Hand as you go from before towards the Stern; but that side of the Ship that is on your Right Hand as you go from the Stern towards the Fore-part is called Star-board, because you go from the Stern forward.

Whoever of the Ships Crew sees a dead Whale, cries out *Fish mine*, and therefore the Merchants must pay him a Ducat, for his Care and Vigilance. Many of them climb often up into the Mast, in hopes to have a Ducat, but in vain.

When the dead Whale is thus fastened to the Ship, two Sloops hold on the other side of the Fish or Whale, and in each of them doth stand a Man or Boy, that has a long Hook in his Hands, wherewith he doth hold the Boat to the Ship, and the Harpooner stands before the Sloop, or upon the Whale, with a Leather Suit on, and sometimes they have Boots on. Underneath the Hook are some sharp Nails fixed, that they may be able to stand firm, for the Whale is very slippery, so that one may easily fall, as upon slippery Ice. These two Men that cut the Fat off have their peculiar Wage for it, *viz.* about four or five Rix Dollars. First, they cut a large piece from behind the Head, by the Eyes, which they call the Ke

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ter piece, that is as much as to say the Winding-
piece; for as they cut all the other Fat all in
rows, from the Whale towards the end, so they
cut this great *Kenter piece* larger and wider than
all the rest. This piece, when it is cut round
about from the Whale, reaches from the
Water to the Cradle, (that is the round Circle
that goeth round about the middle of the Mast,
and is made in the shape of a Basket) from
whence you may guess at the bigness of a
Whale. A strong and thick Rope is fixed to
this *Kenter piece*, and the other end is fixed un-
derneath the Cradle, whereby the Whale is as
it was born up out of the Water, that they may
come at it, and by reason of the great weight
of the Whale, the Ship leans towards that side.
One may judge how tough the Fat is, for in
this piece an hole is made, through which the
Rope is fastened, yet not deep into the Fat,
wherewith they turn the Fish at Pleasure; as
you may see at *K*, in the Tab. *A*. Then, as is
before said, they cut another piece down hard
by this, that is also halled up to the Ship; as
you may see at *L*, in the Tab. *A*; and then in
the Ship they cut it into less pieces about a
foot square. These two Men have in their
Hands, as well as those that stand on the Whale,
long Knives, wherewith they cut these square
pieces. These Knives are, with their Hatts,
about the length of a Man; and the more the
Fat of the Whale is loosened, just as the Hide
is flea'd from an Ox, the higher must they pull
up the Fat with their Pulleys, that they may
cut

cut it the easier. And when they have drawn up this Fat, the Men take it in to them into the Ship, and loosen the Rope that it was fastened unto. The Rope is fastned with a Ring whereinto they put a great iron Hook, which is fastned to a strong Tackle, and also sometimes, before in the Ship, are fix'd two other Tackle, wherewith all the Fat is drawn up into the Ship. In the Ship stand two Men, with Hooks as long as a Man, wherewith they hold the great piece of Fat, which the two Men cut into square pieces with their long Knives. By them stands another, that hath a short Hook with a Ring in his Hands, which he thrusts into the pieces of Fat that are cut square, and puts it upon the Bench or Dressing board, where it is cut by others into less pieces. The two first Men with their long Knives, that cut the large pieces of Fat, stand near the Larboard of the Ship, at that side where the Whale is fix'd, and the other Men that afterwards cut it into less pieces, stand on the other side call'd Starboard, as you may see at *I*, in the Tab. *A*. When it is a good time to catch Whales, and they will not lose it, they tow sometimes several Fish behind their Ship, and catch more; and they cut only the great pieces of Fat of them, and sling them underneath into the Ship. But when they have no more Vessels to put their Fat into, they sail into an Harbour; or if it be calm Weather, and not windy, they stay in the Sea, and fasten themselves to a sheet of Ice, and so they drive along with the Stream

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The other Men cut the Fat into small pieces, on a Table; on the further side of the Table is a Nail fastened, whereunto they fasten a Hook, which they put into the Fat, that it may lye steddly when they cut it into small pieces; the Fat is tough to cut, wherefore it must lie firm. That side whereon the Skin is they lay undermost, and so cut the Fat from it by pieces. The Knives wherewith they cut the Fat into small pieces, are less than the other, about three foot long with their Hafts. They all cut from them that they may not be bedaubed with the Fat, which might occasion a shrinking-up and lameness of the Sinews of their Hands and Arms. One of them cuts the soft and tough Fat into small pieces with a long Knife; this Man they call the *Chopper*, and he is mightily daubed, wherefore he doth hang about him all sorts of Rags and Clouts he can get. The Fat of some Whales is white, of others yellow, and of some red. The white Fat is full of small Sinews, and it does not yield so much Oyl as the yellow. The yellow Fat that looks like Butter is the best. The red and watery Fat cometh from dead Whales, for in the place where the Fat runs out, the Blood settles in its room, and yields the worst and least Oyl. Before the Table is a Gutter made of two Boards nailed together, whereinto the small or minced Fat is flung; by it stands a Boy that shuffles the Fat by degrees into a Bag that is fixed to the end of the Gutter, and is like unto a Pudding-bag, so that it reaches down into the Ship; out of

of this Bag the Fat runs down into a Tub or wooden Funnel, which they put up in empty Vessels or Cardels, as they call them, and the Men that are below in the Ship fill them with it, and so it is kept until they try it up into Train-oyl. When the Fat is cut off from one side of the Whale, before they turn him they cut out the Whale-bone in one entire piece; and this is so heavy, that all the Ships Crew hath enough to do to pull it up. They make use, for that purpose, of a peculiar sort of Hooks, two whereof they fix on the sides, and one on the middle of it, very well provided with strong Tackle, as you may see in the Tab. R, and afterwards they cut out the Whale-bone of the other side of the Fish, and draw it up also with Pulleys into the Ship, where it is cut into such pieces as they bring it hither in. The Whale-bone doth only belong to the Owners of the Ship, and the others that run their hazard, whether they catch few or many Whales. The rest, which take their Pay by the Month, receive their Money when they come home, whether they have caught many or none, and the Loss or Gain falls upon the Merchants. The Hooks that they crane up the Whale bone withal, are made on purpose for it, like a Beam of a pair of Scales; on each end are two sharp points, which they knock in between the Whale-bone; in the middle of the Beam is fastened a long Handle with a Ring, whereon the Ropes are fastened; on this Handle there are fixed two
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other crooked Hooks like Birds Claws ; in the Ring where the Ropes are fastened is another crooked Hook, at the top fastened by a Ring, such a one as we make use of here when we wind any thing up by a Crane ; but in the middle between these two Hooks is fastened another Rope, which keeps the lowermost Hook steady ; the two hindmost Points are knocked into the Whale-bone behind, and the two foremost short ones before, which hold the Whale-bone fast between them when it is wound or pulled up.

The dead Whales, when the Fat is cut off of them, they let float, and are the Food of the Birds of Prey when they are hungry ; but they had rather have dead Whales that have still their Fat left on them. The white Bear is generally not far off, whether there be any Fat left on them or no, and look like Dogs that only feed upon Carrion, and at that time their white Furr is turned into a yellow Colour, and at the same time they shed their Hair, and their Skins are worth very little. Where a dead Whale is near, we see it by the Birds, whereof are many, and also the white Bears discover it, as you may see at g in the Table B, chiefly in the Spring, when but a few Whales are caught, for then they are greedy of their Prey ; afterwards when many Whales float on the Sea, they have their Bellies full, and we do not find so many by a Whale, because they are dispersed.

CHAP. X.

*Of the Trying out of the Train-oyl from
the Fat.*

FOrmerly the *Dutch* did try out their Train-oyl in *Spitzbergen*, at *Smerenberg*, and about the Cookery of *Harlingen*, where still, for a Remembrance, all sorts of Tools belonging thereunto are to be seen, whereof I have made mention before. The *French-men* try up their Train-oyl in their Ships, and by that means many Ships are burnt at *Spitzbergen*; and this was the occasion of the burning of two Ships in my time. They try out their Train-oyl at *Spitzbergen*, that they may load the more Fat in their Ships; and they believe it to be very profitable, for they go their Voyage upon part, that is to say, they receive more or less, according to what they catch: but I do not account it Wisdom to fill up the room of the Ship with Wood, where they might stow Vessels. But our Country-men, as I told you before, put the Fat into the Vessels, wherein it doth ferment just like Beer; and I know no Instance that ever any Vessel did fly in pieces, although they are stopt up very close, and so it becometh for the greatest part Train-oyl in them. Of the fresh Fat of Whales, when it is burnt out you lose Twenty in the Hundred, more or less, according

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where they try up the Fat into Train-oyl, near
Hamburg, they try up the Fat out of the Vessels
into a great wooden Trough or Tub, and out
of this two Men empty it into a great Kettle
that stands near it, that doth hold two Cardels
of Fat, that makes 120, 130, and sometimes
140 Gallons: Underneath this Copper that is
made up with Bricks they put the Fire, and so
they boil it, and try it up into Train-oyl, as
you try up other Fat. This Copper is very well
secured, as the Dyers Coppers use to be: it is
very broad and flat, just like a Frying pan,
made of Copper. When the Fat is well tryed
or fryed out, they take it out of the Pan with
small Kettles, into a great Sieve, that the liquid
only may run through, the rest is thrown away.
This Sieve stands over a great Tub, which is
above half filled with cold Water, that the hot
Train oyl may be cooled, and that what is
unclean and dirty of the Blood and other Soil
may fall to the bottom, and only the clear
Train-oyl swim at the top of the Water, like
other Oyl. In this great Tub or Trough is a
small Spout or Tap which doth run out over
another as big as a Tub, out of which the Train-
oyl runs into another Tub, when it is almost
ready to run over, which is also filled with cold
Water to the middle, wherein it is more cooled,
and becomes clearer, and more refined than it
was before. In this Trough is another Spout,
through which the Train oyl runs into the
Warehouse into a Vatt, whereout they fill it
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into Cardels or Vessels. Some have but two Tubes. A Cardel or Hogthead holds 64 Gallons. A true Train-oyl Barrel doth hold 32 Gallons. The Carcasses they try up the second time, and make brown Train-oyl out of it, others that think it not worth their while, fling them away.

C H A P. XI.

Of the Finn-fish.

THE *Finn fish* is in the length of a Whale, but in bulk the Whale is three times as big. They know the Finn-fish by the Funn, that are upon his Back, near unto his Tail, and also by his vehement blowing and spouting up of the Water, which the Whale doth not do. His Knob on the Head is split in length, that is a blowing hole, through which he forces up the Water higher than the Whale, and with more fierceness, which is not so high as that of the Whale, neither is the Back bended or dected in so much. His Lips are of a brownish colour, and like a twilled Rope. On his upper Lip the Whale-bone hangs, as it doth on the *Whale*; but whether he doth open and shut his Mouth there are different Opinions: Some believe that he cannot open his Mouth, yet this is not true; but he doth not always run open Mouth'd, that the Whale bone may not hurt

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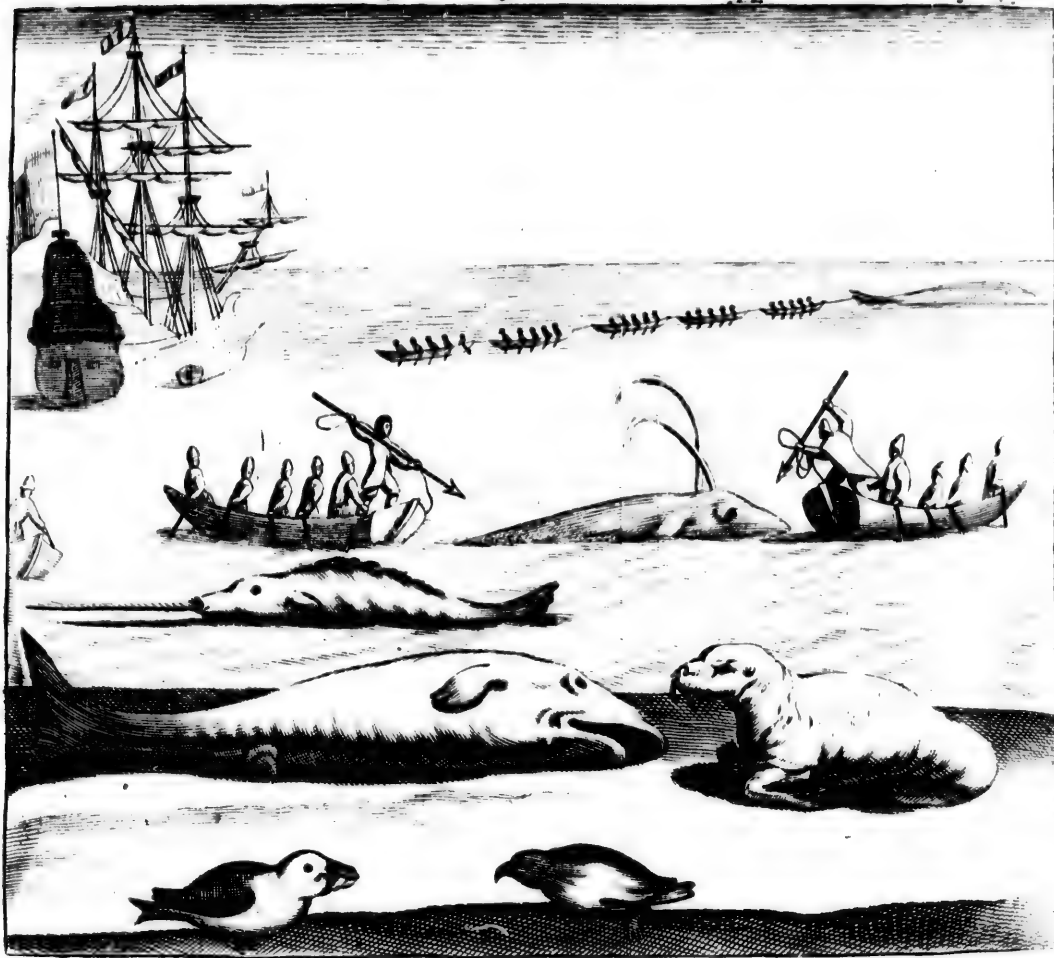
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The Whale fishing & killing of Morises. Supplement Tab. S. Page 170





out of his Mouth at the sides, as it doth in Whales, for else he can open his Mouth if he pleases. Within his Mouth, between the Whale-bone, he is all over hairy, like unto Horses Hairs, which grows within to the Whale-bone that is but new growing, and it is of a blue colour. The other Whale-bone is of a brown colour, and dark brownish with yellow streaks, which are esteemed to be the oldest: The blue Whale-bone cometh from young Whales and Finn-fishes. He is not as black as Velvet, as the Whale is, but like a Tench. The shape of his Body is long and small, neither is he so fat as a Whale, wherefore we do not much care to catch him, for he doth not pay us for our Labour. It is much more dangerous to kill him than to kill a Whale, because he moves quicker, and beats about him with his Tail, and from him with his Finns, so that we dare not come near unto him with our Sloops or Long-boats, for the Launces kill him soonest. I was informed, that once some, before they were aware of it, did sling, by a mistake, their Harpoon into a Finn-fish, whereupon he drew both Boat and Men, all on a sudden, underneath a large Ice-sheet before they were aware of it, and not one of them escap'd. His Tail lies flat, like unto that of the Whale. When the Finn-fishes appear we see no more Whales.

The Train-oyl of the Whale is used by several, viz. by the *Frize-makers*, *Curriers*, *Cloth-makers*, and *Soap-boilers*; but the greatest use

that is made of it, is to burn it in Lamps instead of other Oyl.

The *Greenland Ships* carry 30 or 40 Men, and sometimes more, chiefly the great Ship, and have six Sloops belonging to them, such Ships hold from 800 to 1000 Cardels of Fat; the less Ships have commonly fewer Cardels. The Vessels, from 400 to 700, and have commonly five Sloops or Boats belonging to them. They also go Gallies to *Spitzbergen* to catch Whales; they have three or four Sloops belonging to them: Some put the Sloops upon the Deck of the Ships, others hang them overboard, as they do at *Spitzbergen*, when they are amongst the Ice, that as soon as they call *Fall, fall*, they may immediately let down their Sloops into the Water.

Then there remains on board in the Ship the Steersman, the Barber, the Chyrurgeon, the Cooper, and a Boy, to look after the Ship; the Skipper or Commander himself goeth out with the rest of the Men, for they are all obliged to go a Whale-catching.

In each Ship there are sixty Launces, five Sea horse Launces, forty Harpoons, ten small Harpoons wherewith they strike the Whale under Water, six small Sea-horse Harpoons, thirty Lines or Ropes, and each of them eighty or ninety fathoms long. When they go a hunting they take along with them each Sloop two, and sometimes three Harpoons, six Launces, two or three Sea-horse Launces, three Lines, and five or six small

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According to the bigness of the Sloops, therein is the Harpooner, Line keeper or Giver, and the Steersman: They all row equally, until they come near to the Whale, except the Steersman, for he guides the Boat with his Rudder. They also have in each Sloop a Chopping-knife, to cut off the Rope when they cannot follow the Whale, and a Hammer, and other Instruments, as, Hatchets, Drags, and several sorts of Knives, wherewith they cut the *Whales*. Meat and Drink is also given them according to the usual Custom, he that will have better must take it along with him. Lazy Fellows are in this Voyage troubled with the *Scurvy*, but those that fear neither Air nor Wind, and bestir themselves, escape pretty well; else the *Scurvy* is the common Distemper in this Voyage, besides Fevers, Imposthumes, and other accidental Distempers, and therefore the Chyrurgion must take care to provide himself.

CH A P. XII.

Of Rotz-fishes and Sea-qualms.

Rotz-fish (or *Slime-fishes*) I call these, that in themselves are nothing else but Slime, and they are transparent. I have observed several kinds of these, some whereof have parts like Finns, as that same which I call the *Sea May-slie*. Others are like unto the flat Snails, only instead of Finns they have Stalks like un-

to Feathers. Besides these, I have seen four other sorts that are quite differing in shape from the others, and are called *Sea-qualms* by the Seamen, as if they were a thick Scum of the Sea coagulated together. They are also called after the Latin Name *Sea Nettles*, because they cause a burning Pain like unto Nettles. I have formerly had some Thoughts, that the *Rotz* or *Stume-flyes* might be a Seed flung out and so putrified, and that they did cause this burning Pain by reason of their Putrefaction; and so I did think that they received their shape or form according to the several kinds of Fishes from whence they came, and that some did take after *Thornbacks*, others after *Whales*, and the like; but this doth not seem to be agreeable to Reason, for I have consider'd it better since, and find Life to be a far more noble thing, than that it should proceed from putrefied Seed cast away. They cleanse the Sea mightily, for all the filth and uncleanness sticks to them, just as a Bug doth unto Cloth.

I. *Of the Sea-May-flye.*

These small Fish are very like unto the *Nettles*, because of their transparent Body, and they also dissolve like the same, if you hold them in your Hand. They have two Fins underneath, about the Neck, which are likest unto those of the *Whale*. They are in their shape like unto our white Rowls, broad and thick in the middle, and thin and pointed at each end. As for the rest of the Body, it is very like unto

our *May flye*, have only that the Tail or Body is all along thicker, and only begins to be pointed towards the end. The Head is broad and round, split in the middle; it hath small Horns about the breadth of a Straw; on his Head before it hath two rows of six red little Knobs, three of them in each row; whether they be Eyes or no I cannot exactly tell. Its Mouth is divided or split. From his Mouth down into his Body are its Guts, which one may easily see because of its transparency. It is of a yellow and black colour; but the colour of the whole Fish is like unto the White of an Egg. He moves in the Water just like a *Sea-nettle*. I have drawn him here in his proper bigness. I am of opinion, that the Birds feed upon them, because the *Lambs*, *Pigeon-divers*, and *Parret-divers*, are plentifully seen in those places where these Fish or Sea Insects are seen. The same that I have delineated here I found in the *South Bay* in *Spitzbergen*, on the 20th of *June*; in the *Tab. P* it is marked with *f*.

II. Of the Snail Slime-fish.

These are also quite transparent, like unto the *Sea-nettles*, but they are flat, and wound about like a Snail, and so we find upon the Land the shells of such flat Snails. It is very remarkable, that out of the utmost part of him come two Stalks, like unto the Beam of a pair of Scales, hairy or rough on each side, like unto a Feather. With these Stalks he moves himself up and down like the *Sea-nettle*. They are of a brown

colour: They swim in great numbers in the Sea, as numerous as the Dust in the Sun. It is believed that the *Whales* feed upon them, but I cannot believe that they can be so nourishing a Food for the *Whales*, as to make them so fat; I rather believe that the *Lambs*, *Dipperm-divers*, and the *Parret-avers*, feed upon them. They are not bigger than I have delineated them. We saw many of them in the *South Harbour* at *Spitzbergen*, on the 20th day of *June*. Among the Ice I saw none. The Seamen take these small Fish for *Sticks*, and I should also have taken them to be sticks, if I had not had them in my Hand, and look'd more curiously upon them, and found that they had no affinity at all with the *Spiders*. In the Tab. 2. it is marked with *e*.

III. Of the Hat Shave-fish.

The upper part is like the *Clungulles* or *Teck* stools, and the lower part is round and thick Stalk, sharp, coming into the middle of the Head. It hath a blue Lotion or Knob, that is as thick again as the Stalk. And the upper part may also be compared unto such a Straw Hat as our *Women* wear. From the Stalk downwards it doth grow thick again, and round, yet it is a great deal less than the *Butter*. I have seen them some themselves up from below, and then from the top down again, just as a Stick that is forced down underneath the Water reboundeth again. I got them in the *North Sea*, between *Holt-Land* and the *Hebr*, where the Sea-water mingles with that of the *Isle*. I have allowed

them at *Kuck's-Haven* in the *Elbe*. And I am also inform'd, that sometimes they come as far down as to *Freyburg*. By reason of its shape, it may be call'd *The Hat Slime-fish*, or *Stalk Slime-fish*.

IV. Of the Rose-like shaped Slime-fish.

This *Slime-fish* is as round as a Circle, yet in his circumference between his double strokes a little indented. The Rays spring out single from the middle of the Body, and there are sixteen of them in number, but they divide themselves into two Branches, where they run somewhat closer together, and are split in two. The Body thereof is white and transparent, as is mention'd before; he draws it together, and opens it again as he pleaseth; but the Rays or Spokes are brownish red. On the end of these Spokes, towards the outward circumference are several spots, 32 in number. In the middle of this Plate is another small Circle, and from the circumference of that the before nam'd Spokes begin. It is hollow within, which Cavity may perhaps be his Belly, wherein I found two or three of the small Shrimps. Round about did hang down seven brown small Threads, like spun silk, or like unto the Threads that flie in the Air about Autumn; he cannot move these, I believe he weigh'd about half a pound; he was about half a span broad; the Threads were about a span long. This sort we got about *Island*. One might very well call him the *Plate*, or *Rose-like Slime-fish*, by reason of his figure and shape. I have heard some relate, that

that the *Macarels* do suck their Colour out of these two, but I cannot affirm it, but leave it undecided, until I can assert it by my own Experience. These three first *Sea-qualms* are numerous in the *North Sea* as Atoms in the Air, but about *Spitzbergen* we do not find many of them. I have seen them swim at top only, in calm weather, but in stormy weather they sink to the bottom.

V. *Of the Slime-fish like a Cap.*

At *Spitzbergen*, near the *Muscle-Harbour*, on the 8th of *July*, when the Weather was calm, I saw two sorts of *Slime-fish*, whereof one had six, the other eight Corners: That with six Corners had also six purple streaks with blue brims. Between these streaks the Body is divided like unto a Pumpkin into six Ribs. From the middle of his Body hang down two Threads, that are red like Vermilion, and rough, of small Hairs, they are shap'd like unto the Letter [V]. I did not see him move them when he swam. Within his Body he hath other broader streaks, of a purple colour, and on the edges or brims of a lightish blue one; they represent themselves like unto a great [W]. The whole Body is as white as Milk, and not so transparent as the Body of that that cometh next. It is shap'd just like a Cap with Corners, wherefore one might call it the *Cap-like Fish*.

It is about as big again as it is delineated here. It weigh'd about two Ounces.

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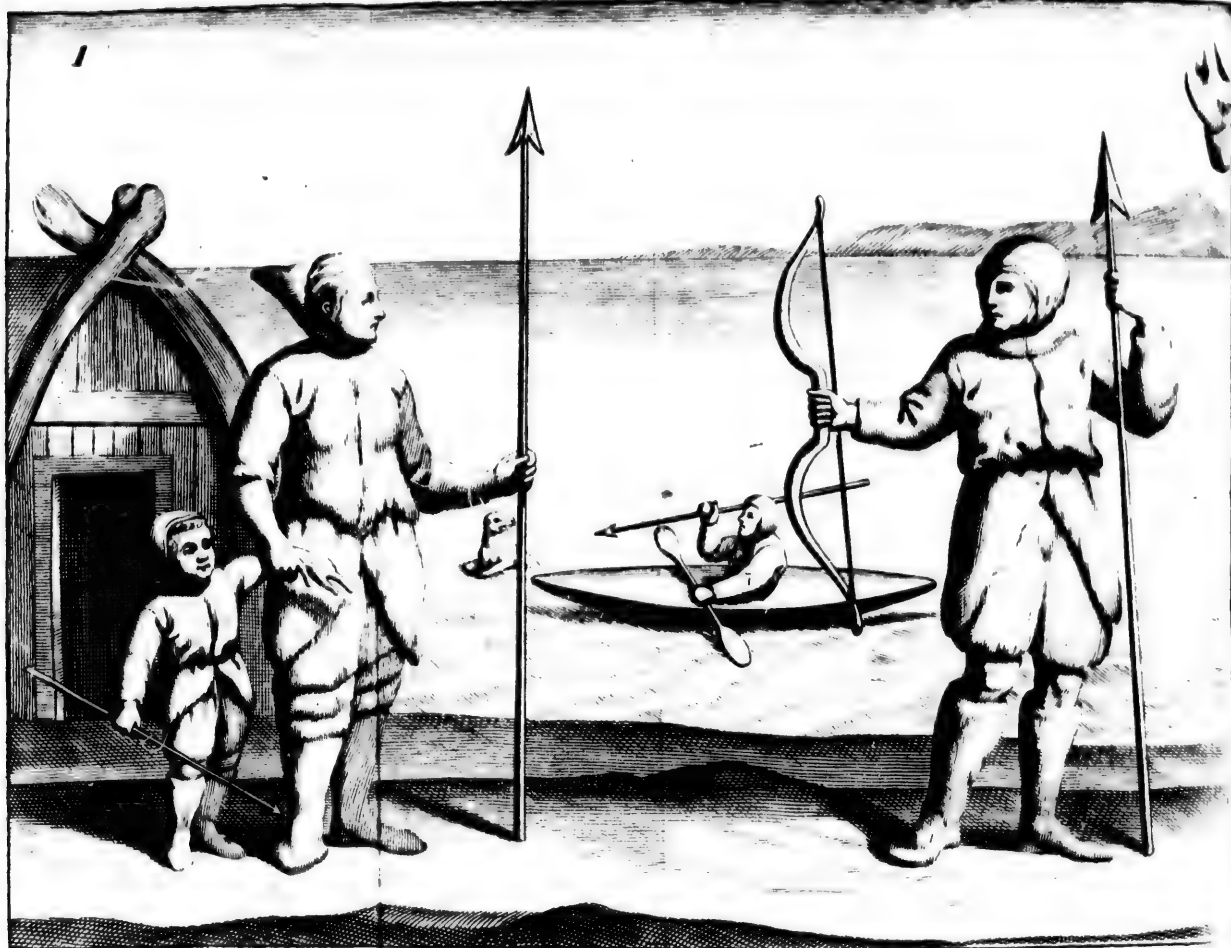
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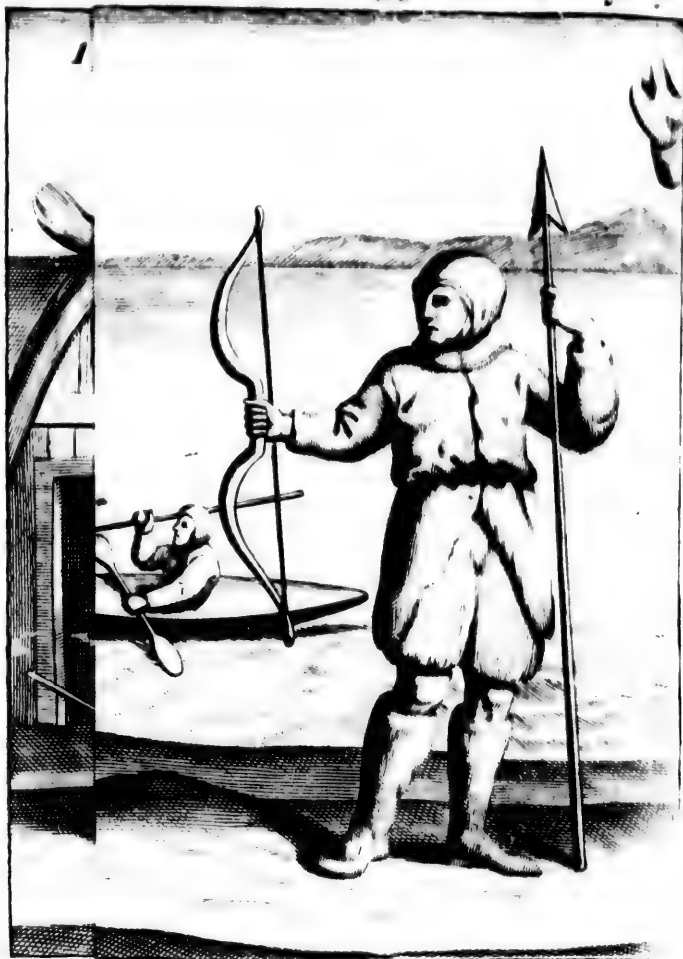
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I did not perceive, when I had him in my Hand, that he did burn me, but it dissolved like Snot or Slime. In the Tab. P. it is mark'd with g.

VI. Of the Slime-fish like a Fountain.

The sixth and last is a very notable Fish; it hath a hole at the top like unto a Quill of a Goose (that may perhaps be his Mouth) which goes into a cavity like a Funnel, wherefore we might call him a *Funnel-fish*. From this hole come down four strokes, two and two, exactly opposite to one another; two of them are cut transversedly, and two are not cut. Those that are not cut are about half the breadth of a straw, and the others that are like unto the Back bones of a Snake, are as broad as a straw; both of them come down beyond the middle of the whole Body. From the middle of the Funnel come down four others, like unto the Back-bones of a Snake, and they come down lower than the others; so that all of them make eight in number. They chang'd their colour as we look'd upon them, into blue, yellow and red, with such delicate colours as a Rainbow. They look'd in my Eyes to be like unto a Fountain with eight streams or spouts, wherefore we might call it a *Fountain-fish* with eight streams. Within him came down from the end of the Funnel something like a Cloud that divides it self into rows which I take to be his Intrails. Where the before-



fore-mention'd outward streaks end themselves the Body is first bent in somewhat, then it turns round, and there it hath many small streaks. The whole Body is as white as Milk, of the same bigness as it is here delineated. I believe it weigh'd about four ounces. I did not perceive that he did burn ones Skin, but he did, like him I mention'd before dissolve his slime.

Since I have seen other sorts of these *Sea-nettles* in the *Spanish Sea*, that weigh'd several pounds, and they were of a blue, purple, yellowish and white colour, that burn more violently than those of the *North Sea*; they suck themselves so close to the Skin, that they raise Blisters, and cause sometimes *St. Anthony's Fire*. The Cuts whereof, together with the Description, I hope to communicate to the Reader at another time. This is mark'd with *b*, in the Tab. *P*.

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A SUPPLEMENT to
*Capt. Wood's and Marten's North-East
 Voyages. Containing some Observations
 and Navigations to the North-West of
 Groneland, and other Northern Regions.*

CHEERY, and other Islands.

OUR Men conceive *Greenland* to be
 broken Land, or a great
 number of Islands at least, *Northern
 Islands.*
 very near to one another.

On the West side they discover'd as far as 82
 deg. the most Northerly Point they call'd *Point
 Purchas*, there they found very many Islands,
 which they thought not worthy to give Names
 to, being careful only to take notice of those
 six or eight Harbours which were commodi-
 ous for their Fishing. On the East-side, they
 went no farther than 78 deg. because the
Dutch disturb'd their Trading on that side.
 There are also many Islands, some of which
 are nam'd; as *Hope-Island*, discover'd in 1613,
 which may be that the *Dutch* call
Willoughby's-Island, or *John Mayen's- Hope-Island*.
Island, though it corresponds well to
 neither; but rather to the latter. It belongeth

to *Greenland*, and is but a small Island, and lies North-east and South-west; whereas the Country Sir *H. Willoughby* landed upon, was a large Country (inasmuch as he sail'd many days by the side of it) and lies North and

South which must be *Greenland*. *Edge's Island* was discover'd 1616, by Capt. *T. Edge*, who had made that Voyage ten times. *Wyche's Island* (so call'd from a

Gentleman of that Name) was found out 1617, but there being nothing remarkable come to our knowledge

concerning these, we pass them over. Only it is worth noting, that both the *Whale* and *Morfs-fishing* was known and practis'd 800 Years ago, as appears by the Relation which *Othier* the *Norwegian* made to his Lord *Alfred* King of *England*; where he also saith, that the *Morfs* were hunted for their Teeth, which were mightily esteem'd.

Cherry Island, when first discover'd I know not, but it receiv'd not its Name, nor was known to be of any Profit, till 1603, when a Ship set out at the Charge of Sir *Francis Cherry* touch'd upon it, and found there some Lead, and a *Morfs* Tooth; but staid not to fish, because the Year was too far spent. However, they call'd it (in honour of Sir *Francis Cherry*, for whose use they took possession of it) *Cherry Island*.

Morfs-fishing. In 1604. a Ship set sail (Mr. *Welden* the Merchant, and *Stephen Bennet* the Master) from *London*, April 15, and arrived at

in *Lapland*, May 1. They staid in *Lapland* till July 1. and July 8. they came in sight of *Cherry*; and they came to an Anchor on the South-south-east side, but, because of the Stream, could not land; so that they failed round about the Isle, and at length anchored two Miles from the Shore. Going on Land, one of them with his Gun killed as many Fowl as almost laded their Boat. July 9. they found on Shore nothing but store of Foxes; that part of the Island was in 74 deg. 45 min. July 10. they weighed Anchor, and stood into another Bay, and came to an Anchor in eight Fathoms, where they saw an incredible number of Morsses swimming in the Sea. Coming to shore, they espied a vast Company of them lying on the Ground; they shot at them with three Guns they carried with them, but with all their Weapons they could kill but 15 of above 1000, that lay there like Hogs huddling together on heaps; but they found as many Teeth as filled an Hogshead. Before the 13th they killed near 100 more, making use only of their Teeth.

In 1605. the same Persons went again, arriving there July 2. They went on shore, and July 6. slew abundance of Morsses, and not only with Shot, as they did the Year before, but with Launces dexterously used, directing them to certain places of their Bodies; they began also to boil their Blubber, and made 11 Tuns of Oil, (five of their Bellies will yield one Hogshead) and abundance of Teeth. Here also they found a Lead-mine under *Mount-missy*, and

and brought away about 30 Tun of the Oar.

In 1606. the same Ship, with the same Persons, was sent again, and landed *July 3*, in 74 deg. 55 min. where they staid till the Ice was all cleared; for the Morises will not come to shore till the Ice be all vanished, where, at one time in six Hours, they slew betwixt 7 and 800 Morises, and two great Bears: they made 22 Tuns of Oyl, and 3 Hoghead of Teeth.

In 1608, *June 21*. was so hot that the melted Pitch ran down the sides of their Ship: in seven Hours time they slew above 900 Morises, making 31 Tuns of Oyl, and above 2 Hogheads of Teeth, besides 40 more. They took alive into their Ship two young Morises, a Male and Female; the Female died, the Male lived ten Weeks in *England*, where they taught it many things.

In 1610. at another Voyage with two Ships, they killed many Bears, and saw divers young ones, no bigger than young Lambs, very game-some and lusty; they brought two of them into *England*. Much Fowl also they slew, and many Seals; and *June 15*. set up an Ensign in token of Possession of the Island for the *Mah-covia* Company: In *Gull-Island* they found three Lead-mines, and a Coal mine on the North side of the Island. Three Ships more also came to fish at *Cherry-Island*: they killed 500 Morises at one time, at other times near 300 more. A Man killing 40 with his Launce at one time Hunting.

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The Morſs, Walruſh, Horſe-whale, Roſ-
marus, or Sea-horſe, (for ſo he is by the An-
cients often called, though of late they have
diſcover'd another Fiſh not unlike him, with
ſtrait Teeth, which they call a Sea-horſe) hath
a Skin like a Sea-cal, (with ſhort and ſad yel-
low Fur) a Mouth like a Lion; if any, hardly
diſcernable, Ears, yet they hear well, and are
frighted with noiſe; (which alſo is ſaid of
the Whale, that he is driven away with the
ſound of a Trumpet) large Breſt, ſhort
Thighs, four Feet, and upon each Foot five
Toes with ſhort ſharp Nails, with which they
climb the Ice; and as large as a great Ox, ha-
ving a great ſemicircular Tuſk growing on
each ſide of their upper Jaw, which are very
much valued, eſpecially by the Northern
People, partly for their uſes in Medicines, as
to make Cramp-rings, (which they make alſo
of the Briſtles upon his Cheeks) to reſiſt Poi-
ſon and other malignant Diſeaſes, wherein
they are at leaſt equal to that call'd the Uni-
corn's Horn; but more for their Beauty, which
is equal to, if not ſurpaſſing, Ivory. The hea-
vineſs of it makes it much ſought after for
Handles of Swords. Their Skins being dref-
ſed, are thicker than two Ox-hides, yet light,
and excellent to make Targets againſt Darts
and Arrows of the Savages. They feed upon
Fiſh and Herbs, and ſleep, if there be Ice,
upon that; where if ſurprized, the Female
caſts her young ones (of which ſhe hath com-
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monly two at a time) into the Sea, and he
self after them, swimming away with them
in her Arms, and if provoked, after she hath
secur'd them, returning many times to set up
on the Boat, into which if she can fasten her
Teeth, she will easily sink it. But if they be
farther from the Water, they all rise up to-
gether, and with their weight and force fall-
ling upon the Ice, endeavour to brake it; as
they did when surpris'd by *Jonas Pool* in
1610, where himself and divers of his Men
escaped drowning very narrowly; one of
them being in the Sea, the Morsses set upon
him with their Teeth, but with very great
labour and hazard of his Company he escaped
from Death, though sore wounded. Fre-
quently also they sleep on the shore, and if
they have convenience, upon a high and steep
Place. They always go in great Companies
and set one to keep watch; which if surpris'd
asleep, 'tis an easie matter to kill all the rest;
but if he give warning by grunting, they
clap their hinder Feet under their two Tusks
and so roll into the Sea. But if they be
caught on plain Ground, yet they are hardly
slain, being both strong and fierce, and al-
ways hastening one way to the Water. The *Dutch*
at first were very much troubled to kill
them, their Shot the Beast valued not much;
their Hatchets and Half-pikes would not
pierce them; nor did they think they could
be killed, except struck with great force.

the midst of the Forehead. The first time they set upon them, of two hundred they could not kill one, but went for their Ordnance to shoot them. Our Men, after a little Experience, found the way to dispatch them with Javelins, as is before rehearsed.

Some imagine this to be *John Mayen's Island*, but it seems rather that it is not; for the Northernmost Point of that is in the 71 d. 23 m. whereas this is 74 d. 55 m. except the Dutch be not so accurate in their Observations and Calculations as were to be wish'd, which I much suspect, *v. Nova Zembla*. Besides *Cherry-Island* is round, not frequented with Whales but Morsses. Our Men also have travell'd it on Foot from North to South, which on *Mayen's Island* cannot be done; and though they tell many Particulars of the Place, yet they never mention the great *Beerenberg*. *Hope Island* indeed is a long Island, lies much what as they say of *Mayen's*, and hath been visited by the Whale fishers, but it is more North than they place their Island. The itch of ascribing Discoveries to themselves hath brought (I fear) Confusion both in this and many other Matters of this Nature.

JOHN MAYEN's Island.

John Mayen's Island, so called from the Name of the first Discoverer, (as the *Dutch* pretend) seems by the *English* to be called *Hope-Island*, or if not, I know not whether the *English* have been upon it. It seems not to be of any great Consequence, all that is spoken of it being that it extends in length from South-west to North-east. The farther it shoots out in length, the more contracted and narrower it grows in breadth; so that in the middle the distance is very small between both Shores. Before the Whale-fishing was removed to *Greenland*, in the Summer-time this Island was much frequented by the Seamen, whom Trade invited thither; and the Island was well known to most of the Northern Adventurers of *Europe*; but since the Whales have deserted those Shores, and have removed their Sea-quarters farther to the North, the Seamen and Fishermen have been forced to follow their Prey to *Greenland*. For it seems the Whales, either weary of the Place, or sensible of their own danger, do often change their Harbours. In the Spring time
Western

Western side of the Island is not so much enclosed with Ice, as that which lies in the North, where it runs out into the Sea, with a sharp Point behind the *Mountain of Bears*; for on this side, all the Year long, the Ice never removes from the Shore above ten Miles; and in the Spring time so besieges it, that there is no Passage through it. For which reason the Mariners, who are bound for this Island, use all the Care they can to avoid the Eastern, and to make directly to the Western Shore, there to lye while the Fishing Season continues; if by miscarriage they come upon the East-side, they are then forced to fetch a compass about the North part of the Island, whereby they are not only exposed to the terrible Winds that blow off from *Bears-Mountain*, but also to the dangers of the floating Ice; for here the Sea flows from South to North, and ebbs from North to South. At the Northern end of the Island appears the *Bears-Mountain*, of a prodigious height, and so perpendicularly steep, that it is impossible to climb to the top of it. This Mountain, from the Bears there frequently seen, called *Beerenberg* or the *Bears-Mountain*, at the bottom takes up the whole space between the Eastern and Western Shore; on the North side it leaves a little room for level Ground to the Ocean; and being of prodigious height, may be descri'd 30 Miles off at Sea.

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The Sea Coast lies thus: 1. *Noords-hoeck*, or the Northern Angle, is the extream Point shooting out to the North. 2. *Oest-hoeck* is the most Eastern Point. *Tsbergh*, mark'd 1, 2, 3, are three Mountains of Ice, or rather vast heaps of congealed Snow, which dissolved by the heat of the Sun, falls from the top of *Bears Mountain*, but upon the Sun's retiring freezes again. 3. *Zuydust-hoeck* is the South-east Angle. From this Point the Shore extends itself from East to West to a little Island, and then winds again to the West and South; in some Places not passable by reason of its steepness, in others smooth enough. 4. *Cleyn Sand-bay*, or *Little Sand-bay*, *Eyerland* or *Eggland*, being certain Rocks full of Birds; here, about a Musket-shot from Shore, the Sea is 60 Fathom deep, and a little farther, the sounding Line will not reach to the bottom. 5. *Groote Hooite-bay*, or great Wood Bay, by reason of the great pieces of rotton Timber that are there found. In this, which is the narrowest part of the Island, are certain Mountains not very steep, from the top whereof any Person calling them that stand upon either Shore, may be heard by both. 6. *Cleyn Hooite-bay*, or little Wood Bay. 7. *English-bay*, and several others, to which the Dutch have given such Names as they thought fit:

GRONELAND.

Called also *Groanland*, *Groinland*, and more anciently *Engroenland*, lies (as Islanders say) like a Half-moon about the North of their Countrey, at the distance of four Days failing: But it seems to lye not so much East, but rather North of *America*. From *Cape Farewell*, in 60 deg. 30 min. on the South, it is unknown to how many degrees in the North. The East and West are encompass'd by two great Oceans, but at what degrees of Longitude is not yet discovered. Only Mr. *Fotherby* found it near the Coast of *Groneland*, in 71 deg. and the South of *Greenland* to be above two hundred Leagues.

It is said to have been discovered first by a *Norwegian* Gentleman, whose Name was *Eric Rotcop*, or *Read Head*; who having committed a Murder in *Ifeland*, to save his Life, resolved to adventure to another Country, whereof he had heard some obscure flying Reports. He succeeded so well, that he arrived in safe Harbour called *Sandstajm*, lying between two Mountainous Promontories; the one

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upon an Island over against *Groneland*, which he called *Huidferken* or *White Shirt*, because of the Snow upon it; the other on the Continent, called *Huayf Eric*. He winter'd in the Island, but when the Season suffer'd, pass'd into the Continent, which because of its greenness and flourishing he called *Groneland*. Thence he sent his Son to *Olav Trugger* King of *Norway*, to get his Pardon, which was easily granted, when he was inform'd by him of his new Discovery. Whereupon divers Gentlemen adventur'd to plant there, who multiplying, not long after divided the whole Country into Eastern and Western, and built two Cities, *Garde* and *Albe*. In *Albe* was a Bishop's See, and a Cathedral Church dedicated to St. *Anthony*; the Seat also of the Viceroy sent thither from time to time by the *Norwegians*. They write also of a great Monastery called of St. *Thomas*, wherein was a Spring, whose Water was so hot, that it dress'd all their Meat; and being convey'd into the Cells and other Rooms in Pipes, heated all the Monastery as if it had been so many Stoves. They say also, that this Monastery is built all of Pumice-stones, and that this hot Water falling upon them, mixes with the outer parts, and produces a sort of clammy Matter, which serves instead of Lime.

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But what the *Norwegians* conquered or pos-
sessed in this Country was an inconsiderable
corner of that large Continent. Themselves
mention a Nation whom they call *Skrelingers*,
to have inhabited in the middle of the Land,
but what they are we know not. But whe-
ther their Paucity expos'd them to the mer-
cilessness of the Natives, or whether it were
an Epidemical Disease which they call the
black Plague, which swept away not only
most of that Nation in *Groneland*, but also
the Merchants and Mariners in *Norway*, that
maintained that Traffick, or whether it were
some other Reason, which is now forgotten;
to it is, that since 1349, little Intelligence
hath descended to us concerning *Groneland*,
till seeking the North west passage to *China*,
occasion'd more knowledge of it. In 1389,
they say, that the King of *Denmark* sent a
Fleet thither, with intention to re-establish
his Dominion in those Parts; but that being
cast away, discouraged him from any further
Enterprize; till now of late *Christian IV* re-
newed somewhat again of that Navigation,
of which by and by. In 1406, the Bishop
of *Drontheim* sent a Priest (called *Andreas*)
to succeed *Henry* Bishop of *Carda*, if dead;
if alive, to return and bring notice of the
state of the Church there. But *Andreas*
never came back; nor hath there been since
any further care taken to supply Bishops, or
maintain Christianity there. There is a
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Relation in *Purchas's Pilgrim*, par. 3. of one *Ivoy Boty* a *Gronelander*, translated 1560, out of the *Norweighish* Language, which gives a sufficiently particular Account of all the Places in that Country that are inhabited by Christians, but of nothing besides.

The occasion of our Voyages to those Coasts, was to find out a way to *China*, &c. by the North-west, which had been fruitlessly sought toward the North-East.

The first whom we read to have search'd the North-West for a Passage, was *Martyn Frobisher*, who in 1576, with two Barks coming to the height of 62 deg. found a great Inlet, called by him *Frobisher's Straits*, whereinto having sailed 60 Leagues with main Land on either side, returned. He found there a certain Oar, which he conceived to be of Gold; and the next Year he made a second Voyage to fetch a quantity of it, but it proving to be nothing but black Lead, answer'd not expectation; yet they found a Silver Mine, which lay so deep and fast in the Rocks, that they could not dig it. They melted Gold also, but in very small quantities, out of several Stones they found there upon *Smith's Isle*. They found also a dead Fish, of about twelve foot long, not unlike in shape to a Porpoise, having an Horn six foot long (such as is commonly call'd Unicorn's Horn) growing out of his Snout, which

is still kept at *Windsor*. In 1578. he went out again upon a Discovery, wherein passing as far as he thought good, he took possession of the Land in the name of Queen *Elizabeth*, calling it *Meta incognita*.

In 1583. Sir *Humphrey Gilbert* upon the same design went to the great River of *St. Laurence*, in *Canada*, took possession of the Country, and settled a Fishing-Trade there. This Voyage I suppose was made upon suggestion of a *Greek* Mariner, who assured some of our Nation, that himself had passed a great Strait, North of *Virginia*, from the West or South Ocean, and offered to be Pilot for the Discovery, but died before he came into *England*.

In 1585. Mr *John Davis* was employed with two Barks to the same search. The first Land he came to, he named the *Land of Desolation*, and is one part of *Groneland*; then he arrived in 64 deg. 15 min. in *Gilbert's* Sound, where they found a great quantity of that Oar, which *Frobisher* brought into *England*, and also *Lapis Specularis*. Thence they went to 66 deg. 40 min. to *Mount Raleigh*, *Totness Sound*, &c. where they saw some few low Shrubs, but nothing else worth noting.

In 1586. he made a second Voyage to the same Place, where he found amongst the Natives Copper Oar, as also black and red Copper. Thence they searched many Places
West.

Westward, and returned with good hopes of discovering the desired Passage.

In 1587. he made a third Voyage, to 72 deg. 12 min. the Compass varying to 82 deg. Westward, the Land they called *London Coast*; and there they found an open Sea, and forty Leagues between Land and Land, thinking this to be the most likely place to find the Passage; and it was from him called *Fretum Davis*.

Thus from time to time proceeded the discovery of these Countries, but now not upon hopes of a Passage to the *Indies*, but for the profit of Trading; till Mr *Hudson*, in 1610, after he was satisfied, that there was no Passage North-easterly, was sent to make a Tryal here also. He proceeded an hundred Leagues farther than any before had done; and gave Names to certain Places, as *Desire-provokes*, *Isle of God's Mercies*, *Prince Henry's Cape*, *King James's Cape*, *Queen Ann's Cape*, and the like; but the Ice hindered him from going further, and the Sedition of his Men from returning home.

In 1612. *James Hall* returning into *England*, and with him *William Baffin*, who discovered *Cockin's Sound*, in the height of 65 deg. 20 min. which differed in Longitude from *London* 60 deg. 30 min. Westward. They saw also the footing of a great Beast they supposed an Elk, or the like. *James Hall* was killed in the Boat by a Native pretending

tending to Trade with them. They tryed the Mine at *Cunningham's* River, which the *Danes* had digg'd before, and found it to be nothing worth. There were Rocks of very pure Stone, finer and whiter than Alabaſter, and Angelica growing plentifully in many Places, which the Savages uſed to eat.

In 1615. Mr. *Baffin* was ſent again; he found *Fair-Point* to differ in Longitude from *London* 74 deg. 5 min. Weſtward. But the chief thing they diſcover'd was, that there was no Paſſage in the North of *Davis Straits*, it being no other than a great Bay; but that profit might be made by fiſhing for Whales, Morſſes, and Unicorns, of which there are good ſtore.

In 1616. Mr. *Baffin* went again. In Sir *Tho. Smith's* Sound, 78 deg. Lat. their Compaſs varied 56 deg. Weſtward, the greateſt variation that is any where known. Deſpairing to diſcover their deſired North-weſt Paſſage, they returned home, and ſince that we hear of no more Voyages made from *England* upon that deſign, except by Capt. *James*, in 1631.

This Ingenious and moſt Skilful Navigator, Capt. *Tho. James* was peſſet'd with much Ice in theſe North-Weſt Seas in *June* and *July*, ſailing from *Cape-Farewell*, by the Iſland of *Reſolution*, to *Mill's* and *Nottingham Iſles*, as alſo that call'd *Mansfield*, from whence he ſteer'd over a great Bay to the Weſtward, near

near *Port-Nelson*, and named the Land *New South-Wales*. He met hereabouts with Capt. *Fox*, in one of his Majesty's Ships, who had been in *Port-Nelson*, but they were soon parted by bad Weather. Capt. *James* continued to roving up and down these Seas, and giving Names to his Discoveries, as *Cape Henrietta Maria*, *Lord Weston's Island*, *The Earl of Bristol's Island*, *Sir Thomas Roe's Island*, *Earl of Danby's Island*, *Charlton Island*, where he winter'd in the Lat. of 52 deg. 30 min. from whence he returned home in 1632. having built a little Pinnacle out of his Ship, in which he passed over to *Cary's Swans-Nest*, and so by *Cape Charles* and *Salisbury-Isle* homewards, having made many additional Discoveries beyond *Hudson*, *Button*, and *Baffin*.

This Island (saith Capt. *James*) and all the rest (as well as the Main) is a light white Sand, cover'd over with a white Moss, and full of Shrubs and low Bushes, excepting some bare Hills and Patches, where the Sand will drive with the Wind like Dust. 'Tis full of Trees, as *Spruce*, *Firrs*, and *Juniper*, which together with the Moss will take fire like Torches or Flax. We found great store of an Herb like *Scurvy-grass*, which boil'd, did extreemly refresh us. We saw some Deer, abundance of Foxes, a few Bears, and some little Beasts. In *May* there came some Fowl, as Ducks and Geese; white Partridges we saw; Fish we could never see any in the

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Sea, nor any Bones of Fish on the Shore side, excepting a few Cockle-shells. The *Muskitoes* upon our coming away in *July* were most intolerable, there being no Fence against them. The Climate (of the *Isle of Charleston*) is most unnatural, the Days in Summer being excessive hot, and the Nights sharp Frosts, even to an inch thickness in the Ponds, and all this in *June* and *July*. Here are divers sorts of Flies, as Butter-flies, Butchers-flies, Horse-flies, infinite numbers of Ants and Frogs, plenty of Vetches, which recovered our Scorbutick Men. And yet that which is most wonderful, the Winter is as severe here as in any place lying 30 degrees more Northerly.

The King of *Denmark* also, partly to advance the Trading of his own, and partly to renew his ancient Pretence to that Country, if any thing should be discover'd worth the claiming whilst the *English* were busie in these Discoveries, set out two Ships and a Pinnace 1605. the Admiral was Capt. *John Connigham* a Scot, *Godske Lindenaw* a noble Dane was Vice-Admiral, the chief Pilots were *James Hall* and *John Knight*, *English-Men*. *Godske* arrived on some part of the Country where he traffick'd some small matters with the Natives, took two of them, and returned into *Denmark*. The other two Ships arrived at *Cape Farewell*, thence went *Frobisher's Straits*, gave

gave *Danish* Names to divers places, traded with the Natives, of whom they brought away three, and found certain Stones in a place called *Cunningham's Ford*, out of an hundred pound of which were extracted twenty-five Ounces of fine Silver.

In 1606. he sent again for four Ships and a Pinnace *Goaske Lindinaw* Admiral, and *James Hall* Pilot-General, they brought away Five of the Natives.

In 1607. *James Hall* was sent again, but the Seamen mutinying as soon as he came to the Coast, brought the Ship back again into *Denmark*, without any thing done.

The King of *Denmark* set out two Ships more, under *Christian Richardson* an *Holsteiner*, with *Norwegian* and *Iselandish* Mariners, who returned before they saw Shore. More of their Expeditions we know not, till 1619, when he sent out *John Munck* with two Ships. They arrived safe at *Cape Farewell*, 60 deg 30 min. where their Tackle was so frozen and full of Iffles, that they could not handle them; the next Day was so hot, that they could not endure their Clothes, but wrought in their Shirts. The South part of *Hudson Bay* he called *Mare Novum*; that part towards *Groneland*, *Mare Christianum*. He arriv'd in 63 deg. 20 min. where he winter'd, and call'd it *Munck's Winter-Harbour*, and the Country *New Denmark*, (it seems to be near

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 Farewell, 60 deg. no Bread, nor boil'd Meat, but nothing so
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the most towardly and hopeful, who might serve for Interpreters and Brokers to the *Danes*; but two of them, *Oxo* and *Omeg*, died in the Ship, and the third (because the *Danes* durst not land or trade by reason of the great numbers of Natives that appeared in Arms on the Coast, ready to revenge them that had been before carried away) was brought back into *Denmark*, to his former Treatment. An Ambassador arriving there from *Spain*, the King was pleased to shew him those Savages, and their dexterity in rowing, which was by all the Spectators admired. The Ambassador sending them Money, one of them had the courage to buy him Clothes after the *Danish* Fashion, got a Feather in his Cap, Boots and Spurs, and all things *ala cavaliere*; he came also to the King, and desired to serve him; but this fervor was quickly decay'd, and the poor Man returned to his sadness and complaints. Some of them endeavoured to get to Sea in their little Boats, but being retrieved dyed of Melancholy. Two lived divers years at *Koldingen* in *Jutland*, where they were employed in diving for Pearl Muscles; in which their Skill and Dexterity was such, that every one that saw them believed they had practised the same Employment in their own Country. Such Success they had, that the Governour promised himself great Profit thereby; and that in a short tim

time he should sell Pearls by the Quart, if they continued. But his Covetousness destroyed his Gain; for not content with what they fished in Summer, he also compelled them under the Ice in Winter time; where one of them fell into such a Disease, from the cold so contracted, that he dyed. After whose Death the other never enjoyed himself; but finding an opportunity, he got his little Boat, and before he was over overtaken got to the main Sea. But being brought back, they represented to him the impossibility of his ever getting home to *Groneland*; but he slighted their Advice, and told them, That he intended to go Northward so far, and when he was there the Stars would direct him into his own Country.

The Country is mostly all High-land and Mountains, cover'd with Snow all the Year, but the Southern Parts more than the Northern. They have very little or no Wood growing there, except some few Bushes, and not many Plants or Herbs; consequently not many Beasts there nourished, but their chief subsistence is upon Fishing. There are divers Mountains, which promise rich Mines of Metal; and some have been found to contain it actually, others only to make a shew. The Inhabitants know neither sowing nor planting; tho' the Soil seem'd to be fertile and pleasant, especially between the Mountains. The

Northern parts, by reason of the terrible Ice and Cold, are wholly undiscover'd ; the southern consist of many Islands, different in shapes and bigness; which seems to be the reason, that in these Seas are many various and strong currents, (and as *Ivor Boty*, saith) very many dangerous Whirlpools towards the West and North, none of which however have been found by our Mariners: The Country seems much subject to Earth-quakes, else very healthful; only it was observ'd, that those who went thither infected with any Venereal Disease grew worse immediately, and could not there be cured. Which they attributed to the purity of the Air, perhaps they might have done it more rationally to the Cold.

Ivor Boty speaks much also of their great numbers of Cows and Sheep; but our Men found no Beast there, but Bears, Foxes, (very many of which are black) Rain-Deer, and Dogs, whereof are two sorts, a bigger, which they used to draw their Sleds; and a lesser, which they feed for their Tables. Our Men observ'd this peculiarity both in their Foxes and Dogs, that their Pizzles were of Bone. Tho' it is very likely, that there are the same sorts which are in *Lapland* and *Samoieda*; but our Men have not search'd any more than the Shores, both because of their short stay, and the Treachery of the Inhabitants.

Of Fishes there is great both Plenty and Variety, Whales, Seals, Dog-fish; but in these are caught the great quantity of Sea-Unicorns, whose Horns are so much esteemed, and kept as Rarities in the Cabinets of Princes. The Natives here are so well stored with it, that they have sufficient both for truck and their own use. They make of them (besides other Utenfils) Swords, and Heads for their Darts and Arrows; which they work and grind with Stones, till they make them sharp piercing as ours. The Horn grows in the Snout of the Fish, and is his Weapon, wherewith he fears not to fight the Whale, and to assault and sometimes endanger a Ship. The Fish it self is as large as an Ox, very strong, swift, and hard to be caught, except left on the Shore by the Tide, or entangled by the Weeds.

Fowls are here in great abundance and variety. Our Men have seen those they call *Bass-Geese*, or such as once a year comes to breed in the *Bass*, a famous Rock or Island near *Edinburgh*. The Natives also have a very great Art and Dexterity in making and setting Snares and Springs to catch them; which they do chiefly for their Skins and Feathers. Two or three of our Men with their Guns killed in one Day Fifteen hundred, and found them worse tasted, better cloth'd than those of the same kind in these Countries;

they could not eat t' n till flay'd, their Skins being very thick, tough and more cover'd with Feathers, which also were not easily pluck'd off; which is the reason that the Natives dress their Skins as they do those of Beasts, and Seals, and make Garments of them, using them to all purposes like other Furs; with the Feathers outward in Summer, inward in Winter; which is also observ'd in all other cold Countries, as well as *Groneland*.

All Persons, that have been there, give a wonderful and strange account of a certain *North-light*, as they call it, not easily conceived by them who have not seen it. It appears usually about the time of the new Moon, and tho' only in the North, yet doth it enlighten the whole Country; sometimes also *Norway*, *Iseland*, and even these Regions of ours, as *Cassendus* (*vita Piresk*, & *exercit. In doctorem*) saith, himself observed, and at large describes. Nor should I much doubt to affirm, that it is that which is sometimes seen in *England*, and especially in the Northern parts, call'd *Streaming*. It is said to be like a great Pillar (or Beam) of Fire, yet darting out Rays and Streams every way, moving also from place to place, and leaving behind it a Mist or Cloud; continuing also till the Sun-beams hide it.

The Country seems to be inhabited by divers Nations, differing in Habit, Manners and Language. Those whom *James Hall* found and

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and brought with him, differed much from
those with whom *Godske Lindenaw* had to do:
That part which the *Norwegians* are said to
have anciently possessed, was an inconsidera-
ble part of that whole Country, and they found
several Nations there besides themselves, go-
vern'd by several Kings; tho' they write not
that they had Wars one with another, but
only against them. Our late Discoverers in
66 deg. 50 min. found a Country which the
Natives (as they could understand them)
called *Secanunga*, who also said, that they
had a great King, carried on Mens Shoul-
ders, and they called him *Cachico*. But more
Particulars than these, I find not.

The Inhabitants are generally of a low
Stature, black Hair, flat nos'd, broad fac'd,
Lips turn'd up, and of a ripe Olive colour,
some of them also quite black. Their Wo-
men (for their greater Ornament doubtless)
stain their Faces in blue, and sometime in
black Streaks, which colour they let into the
Skin, by pricking it with a sharp Bone, that
it will never be taken or worn out. In all
things they resemble the *Samoieds* and *Lap-
landers*. They are very active and strong, yet
could some of our *English* run swifter, and leap
farther than any of them, but they were
hard enough for any of ours at wrestling.
They also are very courageous, and sometimes
desperate; for rather than be taken by our

Men, they will throw themselves down the Rocks and Mountains. Extreemly thievish, treacherous, and revengeful they proved ; nor could any kindness or fair-dealing win them ; but as true Barbarians, never omitted any Opportunity of fulfilling their Desires ; they would steal when they saw the Mariners look upon them. After they had been well used and treated at their Tables, they would shoot at, sling Stones, wound and kill our Men, if they could. Yet are they apprehensive enough, and quickly conceive yours, and express their own meaning. If they had not seen what was asked them, they winked, or covered their Eyes ; if they understood not, stopt their Ears, and the like. They delight exceedingly in Musick, to which they would keep time both with their Voice, Hands and Feet ; wonderful also affectionate one to another, and to their Country. In one Voyage there went a *Danish* Mariner, with black Hair, flat Nos'd, and other, tho' not very exact resemblances of a *Gronelander* ; as soon as they saw him, they came about him, kissed him, hung upon him, and shewed to him all possible demonstrations of Kindness and Affection. And those who were in *Denmark* never enjoy'd themselves, nor had any content, but continually pined away, and languish'd with Discontent for their Condition, and love of their Country. Their Religion

gion, such as it is, seems to be unto the Sun ; for when our People invited them to Conversation, Bartering, &c. they held up their Hands towards the Sun and cried *Totan* ; nor would they come near us till our Men had done the like. But *John Munck* and divers others, having gone farther into the Country, found Images, such as we make of Devils, with Horns, Beaks, Claws, cloven Feet, &c. very ill made ; Altars also, and quantities of Bones of Beasts, as of Deer, Foxes, Dogs and the like, near unto them. They seem also, as all Idolatars, given to Enchantments and Sorceries. Our Men have seen them lying flat upon the Earth, and muttering their Prayers or Charms into the Ground, worshipping the Devil, whose proper Habitation they conceive to be under them. In some Diseases they tye a stick to a great Stone, to which they pay their Devotions, and if they can lift it up easily and lightly, they think their Prayers are heard and Recovery granted. In Winter they retire from the Sea side to the warmer Valleys, where they have their Houses and Towns, which are commonly Caves at the foot of an Hill, round like an Oven, close to one another, and Passages in the inner Parts from one to another ; their Doors, which are low and round, open to the South ; and they dig Trenches also to draw away the Water that falls or drains from

from the Hill. The entrance and some part of their House stands without the Cave, which they Frame very handsomely and commodiously of the Ribs of Whales join'd artificially at the top, and cover'd with Sealskins. They raise also one part of their Floor higher than another, which they strow with Moss to sleep upon. But in their Fishing-time they have Tents, which they remove from Place to Place in their larger Boats. They set up four Poles and cover them with Skins, which serves very well in Summer ; when fishing is done they return with them to their Houses. Their manner of bartering is to make two heaps, one of such things as they desire, the other of what they would part with ; and they cease not to take away from the one or other till the Trade is ballanced. The chiefest things of ours which they valued, were Knives, Needles, little pieces of Iron, Looking-glasses, &c. for these they would sell their Bows and Arrows, their Boats, and strip themselves of their Clothes, but never, like some other Barbarians, sell their Wives and Children.

Their Clothing is either of Birds-skins, with the Feathers and Down upon them, or Seals, Dog-fish, or the like. Seals they use most in their Fishing, because that Fish there abounds, and are easily deceived by
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seeing one clad in their own Livery ; besides that these kind of Furs are not so apt to be wet, though dipp'd in Water. They wear the Hair side outward in Summer, inward in Winter, and in great Colds carry two or more Suits one upon another. They dress their Skins very well, making them dry, soft, and durable, and sew them also very strong, with Sinews of Beasts, and Needles made of Fish-bones.

But in nothing do they shew so much Art as in their Boats or Canoes. They are made of that we call Whalebone, about an inch thick and broad, and these not set like Ribs, but all along from Prow to Poop, fast sowed to one another with strong Sinews, and cover'd over with Seals-skin. They are from ten to twenty Foot long, and about two Foot broad, made like a Weaver's Shuttle, sharp at both ends, so that he can row either way ; and in making this pointedness they are of all things most curious, for therein consists the strength of their Vessel. In the middle of it are the Ribs, both to keep the sides asunder, and to make the Hole in the covering, wherein the Rower sits. They have a Deck made of the same Materials, which is closely fasten'd to the sides, in the midst whereof is a round Hole, as big as the middle of a Man ; so that when he goes to Sea, he sets himself in that Hole, stretch-
ing

ing out his Feet forward into the hollow of the Boat; he stops up the Hole so close with his Frock, or loose upper Garment, that no Water can enter, though it were in the bottom of the Sea. His Frock is strait tyed at the Hand-wrists, and to his Neck, and his Capouch sowed also close to it; so that if the Boat be overturned or overwhelmed in the Sea, he rises again without any wet either upon his Skin or in his Boat. They have but one Oar, which is about six foot long, with a Paddle six Inches broad at either end; this serves him both to ballance his Boat and move it; which he doth with that incredible scelerity, that one of our Boats with ten Oars is not able to keep company with them: The *Danish* relation saith, that they rowed so swift, that they even dazled the Eyes of the Spectators; and tho' they crossed frequently, yet never interfered or hit one another.

Their Fishing ordinarily is darting, their Darts are long, strongly barbed, and at the other end have Bladders fasten'd to them, that when they have struck a Fish, he may spend himself with struggling to get under Water, which yet he cannot do, and so is easily taken.

Besides these, they have greater Boats for the removing their Tents and other Utensils, as also to carry their Fish they have caught

to their Houses; these are thirty and forty foot long, and have sometimes ten, and sometime more seats for Rowers. Cardinal *Bembus* (in his *Venetian History*) saith, that in his time one of these, with seven Persons in it, was by a Storm cast upon the Coast of *Britany*. I know not whether it be worth mentioning that they have Kettles and Pans made of Stone, (some say of Loadstone) that endures the Fire wonderfully, but not having Tools fit to hollow them sufficiently, they make up the Edges of Whalebone.

FREESLAND, or FRISELAND.

Lieeth in 60 deg. more Westerly than any Part of *Europe*; distant from *Iseland* Leagues. It is reported in bigness not to be much lesser than *England*; a ragged and high Land, the Mountains cover'd with Snow, and the Coast so full of drift Ice, that it is almost inaccessible.

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It was first discovered to us by *Nicolas* and *Antonio Zani*, two *Venetian* Gentlemen, that were here shipwreck'd. They describe the Inhabitants to be good Christians, very civil, and to be govern'd by a great Lord whose Name was *Zichmay*, whose mighty Conquests, and strange Accidents may be read in *Hackluit*. It is not our business to write or repeat Romances. Those Men whom our Seamen, (touching there accidentally) saw, were like in all things to the *Gronelanders*, both in Features of Body, and manner of Living, as much as they could judge; so like, that many of them thought it continued to *Groneland*; in which Opinion also they were confirmed by the multitudes of the Islands of Ice which coming from the North, argued Land to be that Way; for many of our Mariners hold, that salt Water doth not freeze, but that all the Ice they find in the Sea comes from the Bays, and Mouths of fresh Water Rivers; for the Ice it self is sweet and fresh, being dissolved, and serves for all purposes, as well as Spring or River Water. Besides the salt Sea (they say) is always in motion, and so cannot freeze. But the *Dutch*, who winter'd in *Nova Zembla*, took Notice, that the salt Water freez'd, and that two Inches thick in one Night.

There

There seems to be good Fishing every where upon the Coast. In their soundings they brought up a sort of pale Coral, and little Stones clear as Crystal. They call it *West England*, and one of the highest Mountains they called *Charing-Cross*.

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